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LAW AND LOG DRIVING.

A case involving the legal rights of log drivers in streams was lately adjudicated at Saginaw, Mich., and excited considerable interest among lumbermen. Jerome P. Kroll sued Thomas Nester for $5,000, on the charge that Mr. Nester ran his logs among the plaintiff's in the Tittabawassee river, making it necessary to remove them at a cost of the amount sought to be recovered by suit. The history of the case in brief is this: Kroll took a contract to drive about 80,000,000 feet of logs on tributaries of the Tittabawassee, above the mouth of the Sugar river, Nester also having about 60,000,000 feet in the Sugar. It was alleged by Kroll that Nester would run his logs down to the mouth of the stream, and whenever space was made in Kroll's drive, Nester would run his logs between so that Kroll was compelled to move Nester's logs in order to drive his own. Kroll claimed that it was worth $5,000 to do this work, and to dam the tributaries in order to obtain a head of water to let the logs down. The judge in his charge to the jury said:

"The plaintiff claims that in the year of 1881 he entered into certain contracts with various log-owners who had logs upon the tributary streams above the Gerrish dam, known as the East Branch and the Middle Branch, and upon the main stream above the Gerrish dam, and below the mouth of the Sugar river; that by the terms of these contracts he was authorized by the owners of the logs to run and drive all their logs from the points where they were banked to within the limits of the Tittabawassee Boom Company—in other words, to drive them below the Gerrish dam. He claims that while engaged in this work the defendant had a large quantity of logs in the Sugar river, a branch of the Tittabawassee, coming into it about 15 miles above the Gerrish dam. The plaintiff claims that he ran those logs belonging to the defendant, from the mouth of the Sugar river down the Tittabawassee and into the boom limits at the Gerrish dam; that after they passed from the Sugar river into the Tittabawassee they created an obstruction to its floating capacity and navigation, and that in order to remove the obstruction so as to get his own logs down he was compelled to expend a large amount of labor, and he asks compensation for the same in this suit. I think you can find from the testimony in this suit that the Tittabawassee river, up as far as the mouth of the Sugar, at least, was a public highway and a navigable stream."

The judge then proceeded, at some length, to recall the attention of the jury to the fact that although the plaintiff commenced the driving of the logs about April 19, the Gerrish dam was not put in until about May 15, and that all the logs that passed into the boom limits between those dates were brought down by the assistance of the natural flow of water, while the logs that were put through after May 15 were driven by the aid of the Gerrish dam and other dams above it, and that they could not have been driven with the unaided natural flow of water. The jury were instructed that, under the statute, they might render a verdict in favor of the plaintiff for whatever logs were run down by the aid of the natural flow of water, if they found that any of the defendant's logs were so run by the plaintiff.

The court also charged the jury that the plaintiff could not recover for any work performed hy him on Mr. Nester's logs after the Gerrish dam was put in; for all the work claimed to have been done after that was by means of artificial floods created by dams put in for the purpose; and the statute does not apply to work of that character. It was designed to provide a mode for recovering the cost of work done in removing obstructions from streams that are public highways. Before parties can recover for work done in running logs upon a stream navigated in an artificial way they must either make a contract with the owners of the logs, or they must form a company for the improvement of the stream, and obtain from the legislature a right to take tolls. Private persons have no right to dam or boom a navigable stream of water without authority from the state. It appears that the plaintiff has not proceeded under the law, but has merely acted as the agent of various log owners, who could not confer any power on Mr. Kroll to to take a stream in its navigable state and increase its navigability by the use of dams and floods, and then charge others for the use of such improvement. The court therefore finally charged the jury that in making up their verdict they should omit any consideration of the work claimed to have been done by the plaintiff after the Gerrish dam was put in, where the Tittabawassee company receives logs put in above, as whatever work may have been done after that time was accomplished by the aid of artificial dams and floods, without corporate authority, or special permit from the state. The jury retured a verdict of $800 for Mr. Kroll.—*Northwestern Lumberman.*

THE TORONTO TRADE.

According to the statements obtained from the principal lumber dealers of the city, the lumber trade this year has been very satisfactory in volume, and has been equal to that of last year if not ahead of it. The demand has been well up to the supply, so that the prices of last year have been maintained, and for some grades have shown an advance of 20 per cent. The bulk of the lumber handled by the Toronto dealers has of course been shipped to the United States via Oswego and Charlotte. The Americans are in fact appreciating Canadian lumber so much that an agitation has been started for a repeal of the duty. The Secretary of the Chicago Lumbermen's Exchange has been for some time past in this country collecting facts and stastistics that would strengthen the arguments for the free admission of Canadian lumber into the United States. The American lumber is getting scarce, and lumbermen on the other side contend that no harm would be done to American interests by Canadian competition. While the export trade from the United States has increased during the year the local trade has hardly been so good, but the country trade it is said has been satisfactory. It is estimated that taking all the Toronto firms, the total amount handled for all purposes during the year reached 140,000,000 feet. Of this quantity one firm handled not less than 60,000,000 of feet, while another important firm handled 20, 000,000 ieet.

Owing to the want of snow the output was not so great last season as was anticipated. Reports from the lumhering districts state that there is now too much snow, the depths in many parts being four feet, which puts serious difficulties in the way of handling.

With regard to next year's business the feeling is not to stock over what the mills had last year. It is believed that it would not he wise to increase the product, as prices are as high as they can be expected to go, and there is a fear in the trade of over-production. The cost of stocking last season was very high. Provisions were dear and lumbermen were scarce. It is too early in the winter to predict what amount will he hauled this shason, but if thcre is favorahle weather there will, no doubt, be a good supply.—Toronto *Mail*, Tuesday 12th Dec.

TO TRANSPLANT TREES IN WINTER.

E. W. Cornell, Clinton Corners, N. Y., gives to the *Dutchess Farmer* suggestions about transplanting trees in winter, a useful method when time is a matter of importance, or when the immediate securing of large specimens for the lawn is especially desired: "When properly done the holes should, of course, be dug when the ground is not frozen, and the soil placed in a compact heap and covered on the south side of the hillock with some coarse litter from the horse stable to keep a portion of the soil from freezing, which will give the planter access at any time during the winter. Sufficient loose soil to pack about the ball of earth will be taken up with the tree, which will be nearly sufficient of itself to fill the receptacle, aud the dressing will be just where wanted to spread about the tree for winter protection and for immediate nourishment in the spring. Experience has taught me that it is highly needful to furnish some fertilizer for all trausplanting trees at the time of removal. In halling out trees it is not advisable to wait until the ground is frozen hard, as is often done, which greatly increases the labor and expeuse,

"It is only necessary to dig a narrow trench about the tree, which may be quite near the trunk; the soil being damp will be held by the many fibrous roots from falling into the trench, which should be deep enough for cutting down through the horizontal roots, which, with most trees, will require a depth of from 15 to 20 inches, laying bare the top roots. Having dug about all the trees in like manner, all you have to do is to wait until the ball of earth is frozen, when you have only to chop off the the main perpendicular root, and with the trunk for a lever, two can readily load upon a stoneboat or sleigh a tree, with ball of earth attached, as heavy as a team can haul. When arrived at the place of setting drive the boat or sleigh upon the heap of soil in such a manner that it will incline toward the pit, and in a moment you may slide the tree to its appointed place."

"Tramp some of the soil from under the dressing around the ball of earth; put the litter about it, and the work is done much better than it could be at any other season of the year, for the multitude of fibrous roots in the ball of earth preserve the roots from any check until the larger roots can throw out a colony from the points where they were cut off. There is no necessity for losing one tree in 100 by this method, while a large tree can be removed with as much safety as a small one, providing the ball of earth attached be correspondingly enlarged. This method is exceedingly favorable for the resetting of evergreen trees, which otherwise is attended with much danger of loss from the least drying of the roots. It is a work well adapted to the winter, as it can readily be discontinued at an inclement season, to be resumed at any favorable moment."

A QUEBEC despatch says:—Only fifteen carloads of Messrs. Grant & Co.'s square timber are coming down by the North Shore Railway this winter. The balance will remain over until the spring. The timber has now to be piled on the wharf, as it cannot be sent by water to the coves, owing to ice on the river.

IN reference to the McLaren-Caldwell case the *Lumberman's Gazette*, of Bay City, Michigan says:—At this distance the premises of the *Mail* appear to be well taken, and proof against its assailauts. Mr. McLaren is quite well known here, and his victory, founded as it apparently is upon justice, will gratify Saginaw lumbermen.

THE Belleville *Intelligencer* says:—Lumberers may be interested in knowing the precise quantities of the different woods wintering over here. There are as follows:—White pine (square), 6,532 feet; white pine (waney), 3,354,943; feet; red pine, 2,363,624 feet; oak, 1,362,153 elm, 530,611 feet; ash, 212,422 feet; birch, 78,-413 feet; pipe staves, 293; puncheon staves, 1,-007; pine deals, 2,507,704; spruce deals, 1,012,-920.

OVERPRODUCTION THE CAUSE OF DEPRESSION.

That zealous greenbacker, Mr. Sam Cary, has often stoutly asserted in his speeches that there is no such thing as overproduction—an expression so fallacious that the simplest mind can realize it. When any commodity accumulates much in excess of the demand for it, an overproduction has taken place, and a weakness in its value will result in proportion to the size of the surplus. This is a commercial law as ancient as trade, and needs no argument to prove it.

It follows naturally, then, that overproduction, more than anything else, is the cause of every business and financial depression. Speculation is often given as a reason why panics occur, but really, speculation is only an incident in the general movement of trade, and as often grows out of a panic as apparently produces one. Speculation is simply a venture on the change in values, on the future, or on the differences of prices in separate localities. It can hasten a financial revulsion—can be the incident that precipitates it—but of itself alone it can never be the cause of a break-down in general business. The flurries in the New York stock market since the summer of 1881, at each occurence giving rise to forebodings of a business revulsion, but always failing to bring it, are examples of great disturbance in finances without a corresponding effect on general commercial relations. The reason of this is that while the stock speculators were forcing securities up and down, and creating a panic among themselves, the people at large were engaged in producing what they found a ready market for at good prices, and were, therefore, prosperous. As long as there was not such an accumulation of farm products and manufactured goods as to glut the various markets and prevent a copious interchange, the bulls and bears of the stock exchange might bellow and roar themselves hoarse, the bankers utter wise predictions of near depression—nobody heeded so long as he could sell all he could produce, and get good prices for it.

In this heedlessness of the future lies the danger of overproduction, which is really the cause of every decline in values. When there is an active demand for commodities, and it is long continued, producers become infatuated with the notion that there is no limit to it, and that production can be augmented without any regard to the prospective demand. Business and manufacturing branch out, one plant inducing the establishment of another. Capital is aroused, and once broken loose from its conservatism, seeks investment in new enterprises, or the expansion of the old in a crazy kind of way that would be impossible in hard times. Take the rush in railroad building for the last two years as an instance. Previous to that time populous and thrifty districts of the country lay without facilities of transportation, and delegations of citizens could neither beg nor buy the railroad companies into building extensions or branch lines. Now what do we see? New railroads have within the past three years penetrated to points before obscure, where there was the least show for present or prospective business, especially if there were any danger that a rival company would build a road and obtain the traffic. A big saw-mill, or any other manufactory, has been inducement enough to coax a company to put in a branch connecting it with the main line. There has been a kind of mania for railroad building that at one time seemed without reason, and has actually caused an overdoing of the thing, which railroad managers now acknowledge; though in this particular instance overproduction has benefitted everybody but those bondholders whose securities have sunk in value on their hands.

The overbuilding of railroads has stimulated the steel rail makers, and iron-workers to the top of their speed in turning out product to meet the demand. There was no means of knowing how much would be required, and though rail makers operate only on orders, the tendency to overproduction has been felt in the planting of new mills and enlarging the capacity of old ones, so that machinery is now liable to stand idle. The overproduction can be seen in too much capacity to produce.

In the lumber business the demand for product has been such during the last two years that every means has been employed to increase it. Pine lands have been bought up at advancing values, hundreds of mills have been erected, logging railroads constructed, streams improved, and new fields of operation have been invaded by the lumbermen's enterprise. The result has been that the output of this year has been considerably larger than it was in 1881, while the capacity of production has been increased to a great extent, giving promise that there will be a considerable increase in manufacture during the season of 1883, earnest of which is given by the determination of operators to put in a larger stock of logs that they did last year.

Every variety of manufacture and business might be reviewed, showing that the majority of them have, during the past years of prosperity, been crowded a little beyond what the demand required; that is, the demand in the earlier period of prosperity gave industry such a momentum that now that a halt is necessary no brakes are at hand. Now the danger is that, before the motion can be arrested, industry will be wrecked on an accumulation of products.

Coming back to the lumber business, it is plain to be seen that the depression of values with which the manufacturing has closed is consequent on overproduction. It is true that if there had not been some falling off in railroad building, and if the farm product of 1881 had been a little larger, there would have been no slackening in the demand for lumber, so that the output this year would have been as quick in the market as it was in 1881 and the winter of 1882. Yet it is a fact that the enormous surplus on hand now represents a certain amount of overproduction, or else prices would not now be weak. Any lumber dealer would regard the attempt of the lumberman's meeting of this city to bull prices this winter repeatedly, as it did last winter, as a mockery of the good sense of lumbermen at large. That is to say, on account of the fact that lumber has been produced considerably in excess of the demand, it is not worth as much as it was six months ago. Nothing is plainer than this, yet the loggers and mill men are going ahead this winter to still further increase the surplus, with the opinion apparently strong in their minds that there is to be no halt in the increase of consumption. If the value of lumber next season drops to something like the low figures of 1873 and the years following, the manufacturers will have done it themselves. The *Lumberman* is not undertaking to say that there may not be contingencies that shall give an upward turn to affairs. But from present appearances it is safe to judge that the country will not need more lumber next year that it did this, and it would not be surprising if it should consume less. At any rate, considering the large surplus now on hand, it would appear to be sufficient for all emergencies, even if the cut next year should show no increase.—*Northwestern Lumberman.*

COLLECTIONS OF WOODS.

The Chicago *Lumber Trades Journal* publishes the following extracts from a letter from Professor C. S. Sargent to Morris K. Jesup, Esq., dated Nov. 11, 1880. Though they have special reference to the United States these suggestions are worth considerarion in Canada:—

The following suggestions are made in regard to the collections of the woods of the United States:

1. That every arborescent species found growing naturally within the limits of the United States should be represented in the collection.

This would include the semi-tropical West Indian species which reach southern Florida, and the few Mexican species extending north of the boundary into our territory. It is essential that these should be included in order that the collection may fully represent our arborescent flora; and because many of these southern species produce material of great value, becoming large and common trees toward their centres of distribution south of our boundary. They must become, sooner or later, objects of very considerable economic interest of the American people. A few exotic species of first rate economic value, already either fully naturalized or rapidly becoming so, should also be included. Such trees are the Eucalyptus, the Orange, the Ailanthus, the Pride of China, the Tallow tree, and perhaps one or two others.

2. That the species be arranged scientifically; that is, in their botanical sequence, in the order and with the numbers adopted in my forthcoming Census Report on the American Forests.

3. That each species, while in connection with its nearest botanical allies, should be so arranged with its products that it would form in itself a complete exhibit. Each species would thus be represented by a portion of the trunk showing bark, nature of the wood, rate of growth, and proportion of sap to heart wood; and by copious mounted specimens of the foliage, flowers and fruit. Around this species exhibit should be grouped the products of the species, such as specimens of planks, polished and unpolished; pieces of the wood of monstrous or distorted grain adapted to cabinet making; specimens illustrative of the durability of the wood of the species; specimens of tanning material, dies, wood pulp, turpentine, gums, and other minor products of the species.

4. That a conspicuous label be attached to each of the species groups, giving the Latin and English names of the species, with the principal synonyms by which it is known, its geographical range, size, etc.

On the label should also be given the results of our census tests of American woods.

These suggestions being carried out, the visitor would see at a glance the scientific character and position of every tree in the United States in relation to its botanical connections, the economic value and nature of its products, and its geographical distribution.

Such a collection, thus arranged, would afford material for the information and instruction of every class of people in any way interested in our trees and their products and uses. No collection of forest products has yet been formed on a sufficiently comprehensive scale to enable the student to readily examine the sylva of a country in all its scientific and economic aspects.

It is recommended that photographs of American forest trees and American forest scenery should be added, and that this collection should be made as large as possible, as being a very important feature in relation to landscape gardening and horticulture.

The public spiritedness of Morris K. Jesup, Esq., of New York, induced him to provide the funds to carry out the above suggestion of Prof. C. S. Sargent, of Harvard College, and the place selected for the exhibits is in Central Park, N. Y., where already those visiting the place may witness a large fulfillment of the object. The extracts were furnished the *Journal* by Prof. Sargent.

U. S. LUMBER DUTIES.

The Chicago *Lumber Trade Journal* says:—The time is fast approaching when the attention bestowed upon the lumber tariff question by the United States Tariff Commission must assume the form of a report in the line of recommending a cessation or continuance of the existing revenue on this indespensible commodity. Wherever we have penetrated a glance into regions where the lumber trade is carried on, we have been imperatively impressed with the degree of importance attached to the subject by extensive dealers, so far as relates to the desire for a removal of duty. Men who know as accurately as may be known from long experience and acquaintance with the subject the signs of the times, and therefore do not halt or falter in expressing their opinions. It may be imagined by some of both factions at this point that outside of Chicago, where the tariff discussion was born, or, at least, received the first large and important discussion, and where it drew to both sides able and farseeing men, there has been little if any interest evoked. This, they will find, is a great mistake, as we have the assurance of men who figure quite conspicuously in the industry at several leading markets that they are anxious to welcome free Canadian lumber, and are ready to join encouragement and whatever aid they may to the leaders of revolt against monopoly.

These men, too, know something of the true philosophy of advancing the rapid and beneficent growth of our agricultural possibilities, and while desirous that the manufacturer should maintain in his sales a satisfactory and ample margin of profit, they are on the other hand, not willing to witness the desirable promotion of our West retarded by exorbitant prices, nor prepared to encourage a laxity and dullness of their business through the unreasonableness of American timber owners and manufacturers. The resources of the manufacturer are too certain in their promises to add fabulous sums to their already overflowing coffers of riches, to cause them to betray the least anxiety, and what the country demands is not that they should not receive a fair and reasonable price for the product, but relax the despotic power, placed in their hand by the present revenue, to dictate future prices, or be forced to do so by the admission of foreign lumber free of duty.

The flow of emigration to the Western States and Territories, which, to the extent already settled, has been largely due to procuring necessities at prices within a reasonable demand on sellers' pocketbooks, must be encouraged by the further possibilities of securing in the future material cheaply and plentifully for the construction of homes and all building necessities, otherwise the fact of being unable to secure this material at rates conforming with the means of colonists, will retard more than is generally supposed the influx of the foreign emigration, indispensable in advancing settlement in the apparently boundless and unoccupied territory of the West.

The good that may early result to the prospective development of opportunities for our welfare as a nation in no small measure lies within the power of suitable legislation concerning the lumber supply and proper protection to consumers, and should emanate from the wisdom of next Congress.

GROWTH OF BARGE TRANSPORTATION.

Previous to the year of 1862 great difficulty had been experienced by shippers of lumber in obtaining towage for that commodity from the West to Buffalo, and on account of the rapidly increased demand and supply the freight on lumber had attained to the almost prohibitory price of $7 to $10 per M. feet from the Saginaw Valley to Buffalo. J. S. Noyes, of this city, then, as now, a large dealer in lumber, thought to overcome the difficulty and to place this product of the great west upon the Eastern markets at reduced rates of freight, and so far succeeded that in less than ten years after his first experiment the price was reduced from $9 to 9 shillings.

The first attempt was made by himself, Mr. John T. Leaton, of the old firm of Farmer, DeBlaquire & Deeds, Joseph Van Vleek and one or two others in the summers of 1860 and 1861, by making up immense rafts on the Saginaw River, the details of which are still familiar to many of the people of Bay City, and towing them through the lakes. Bugbee and Selim Sears were also interested in rafting lumber, and H. A. Frink tried rafting staves, though unsuccessfully. The rafting of lumber proved but a partial success, for notwithstanding only one raft was lost the timber became so much damaged by bruising and dirt that this was found impracticable. It was evident that something else had to be done, and in the spring of 1862 it occurred to Mr. Noyes that the hulls of the old steamers, which were at one time the pride and glory of our lakes, several of which were dismantled and stripped of their cumbrous cabins were lying at anchor and sunk at the foot of Belle Isle, Detroit, could be utilized in this direction. He at once purchased two of them, the Sultana and Empire, at an expense of about $25,000, soon had them in commission; hired a tug at $100 per day, and running both barges with one crew, consisting of a captain, four men, and a cook, transferring these from an empty barge to a loaded one at the mouth of the Saginaw River, safely carried 1,000,000 feet of lumber on each barge at each trip. The Sultana arrived in Buffalo on her first trip in June, 1862.

Thus was devised a cheap style of transportations which has been growing ever since, and has, in fact, become nearly the only way of carrying lumber to the Buffalo market. Its effect was to bring down on the head of young Noyes the opposition and anathemas of the rich vessel owners of the lakes. In one man only he tells

us—the lamented Capt. E. P. Door—had he a friend to his scheme, who gave him encouragement and counsel. In 1863 he purchased the tug Reindeer, and thus commenced a system of transportation which has grown to mammoth proportions, not only in lumber, but grain and other products, and not only upon our lakes, but it has extended to the shores and bays of both oceans.

In the place of one spar and one tail to keep them before the wind, they are now built with two and even three masts, enabling them better to care for themselves in case of compelled desertion by the propeller. In 1870 there were 128 barges on our lakes of a capacity of over 40,000 tons custom house measurement, and representing a capital of over $1,000,000. So that the old Sultana and Empire, whose arrivals and departures to and from Buffalo thirty-five years ago created an excitement unparalleled in the history of passenger traffic, were destined to become in their old age the pioneers of a system of transportation that to-day feeds one half of the men who go on the lakes for a livelihood.—*Bay City Call.*

FARMING FORESTERS.

The Chicago *Northwestern Lumberman* says: At the national agricultural convention which has been in session at the Grand Pacific Hotel, this city, for several days, recently, the subject of forestry was brought under discussion. Ex-governor Furness, of Nebraska, read a paper entitled "Tree Planting and Growing on the Plains." He characterized it as not a treatise on forestry, but an account of what had been done to convert naturally treeless plains into groves of valuable timber. He asserted that, through the stimulus of rigid legislation, Nebraska had taken on an acquired diginity as a timber-producing state. No longer ago than 1854 tree planting was begun there, spontaneous growths of timber being noticed along the water courses. Seedlings were found to thrive well on upland prairies, and gradually trees were added other than the native ones. Since the policy of tree planting was introduced, the speaker said over 244,350 acres of land in the state had been planted with forests. During the past 28 years, he estimated, over 605,514,000 trees have been set out, the spontaneous growth influenced by this planting equaling half as many more. The best and most profitable trees for growing in that state experience has shown to be as follows: Six varieties of ash, seven of oak, walnut, hickory, elm, locust, linden, sycamore, maple, willow, cedar, several varieties of pine, and many others more have been to some extent handled with success. Though nature was, after all, the best nurseryman, yet man himself could do much to second the efforts of nature. The order of planting was given as follows: Cottonwoods, box-elder, soft maple, elm, ash, black walnut, locust, catalpa, oak, etc. The convention proposed to show its spirit on the forestry question, and adopted the following resolutions:—

Whereas, We begin to realize the lamentable wasting of the forest lands of the United States, and the sad effects of destruction upon the climate and water supply of the country, and we are forced to confess our need of the knowledge of the better management of the woodlands than is now possessed by the people; therefore

Resolved, That we urge upon the state legislatures the propriety of selecting judicious persons to act as state forestry commissions, whose duty it shall be to instruct the people in regard to forest trees and their production and management; said officers to report annually upon the condition of the woodlands in their respective commonwealths.

Resolved, That we beg of all the agricultural colleges established under the land grant of congress that they shall lose no time in planting state arboreta and establishing forest experimental stations where all species adapted to the soil and climate shall be tested, and whence surplus seeds and plants may be distributed. Annual reports of these establishments to be made to the governors of the state boards of agriculture.

Resolved, That congress be asked to establish one or more experimental forest stations upon the public domain, where the propagation and testing of useful trees shall be the leading object, with the collection of seeds and plants to be distributed by or under direction of the United States agricultural department, to which bureau these stations shall make annual reports.

THE TRADE OF QUEBEC.

The *Chronicle* of Dec. 21st give the following statement of the comparative receipts of timber measured and culled to date; also, the average of the past five years:—

WHITE PINE.

1881.....6,029,041
1882.....7,961,014

1,931,973 feet more this year.
Average of past five years.....5,738,572 feet.

Waney.

1881.....3,065,274
1882.....3,105,329

40,055 feet more this year.
Average of past five years.....2,365,593 feet.

RED PINE.

1881.....1,945,720
1882.....1,456,910

488,810 feet less this year.
Average of past five years.....1,312,010 feet.

OAK.

1881.....2,994,477
1882.....1,313,109

1,681,368 feet less this year.
Average of past five years.....1,690,262 feet.

ELM.

1881..... 1,027,670
1882..... 714,649

313,121 feet less this year.
Average of past five years.....638,760 feet.

ASH.

1881..... 408,798
1882..... 310,769

98,029 feet less this year.
Average of past five years..... .....210,906 feet.

BIRCH AND MAPLE.

1881..... 151,774
1882..... 269,661

117,887 feet more this year.
Average of past five years.....265,749 feet.

PIPE STAVES.

1881..... 418 M.
1882..... 564 "

146 M. more this year.
Average past five years.....331 M.

WEST INDIA STAVES.

1881..... 671 M.
1882..... 1,429 "

758 M. more this year.
Average of past five years.....664 M.

SAGINAW MILLS.

The following item, being a comparison of the work done by some of the saw mills in the Saginaw Valley in 1857 with that of tho season just closed, will prove interesting to many of our readers: The largest cut of any one mill in 1857, at East Saginaw, was 4,500,000 feet, that of Cushing & Co. Here are a few of the others: J. Hill, 2,500,000 feet; L. B. Curtis, 3,000,000 feet; D. G. Holland, 1,500,000 feet; Whiting & Garrison, 3,000,000; Copeland & Co., 1,500,000; Atwater mill, 3,500,000; Gallagher mill, 2,000,000: G. D. Williams & Son, 2,500,000; Curtis & King, 3,500,000. At Carrollton the mill of J. A. Westervelt cut in that year 4,000,000; the Johnson mill and Fisher mill at Zilwaukie, 4,000,000 and 1,500,000 respectively. At Fortsmouth, the McCormick mill cut 1,500,000; and James Fraser mill 3,000,000; and three others from 1,200,000 to 2,000,000 each. There were 14 mills at Bay City and Kawkawlin cutting from 1,500,000 to 4,000,000 each. The mill statistics for 1857 were furnished by the Hon. John S. Estabrook, of East Saginaw, still in the prime of life and engaged in the lumbering business. Of the seventy odd saw mills now on the Saginaw river, the smallest cut of any is about 7,000,000 feet and the average will probably reach 16,000,000. The mill of Barker & Birdsall, (formerly McGraw) cut this year a fraction over 40,000,000 feet; that of H. W. Sage about 32,000,000 feet; and the Whitney & Batchelor mill 31,500,000 feet. Last year, running some nights, the McGraw mill cut 55,260,722 feet. In 1857 there were 10,000,000 shingles manufactured on the river and the past year the quantity will considerably exceed 300,000,000. Thus do we progress.—*Lumberman's Gazette.*

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of trade, for the month of Nov., and for the first 11 months of the year:—

MONTH ENDED 30TH NOV., 1882.

	Quantity. Loads.	*Value. £.*
Timber (Hewn).		
Russia	27,470	58,422
Sweden and Norway	34,290	56,460
Germany	20,984	52,498
United States	3,597	20,473
British India	1,630	22,136
British North America	47,071	239,868
Other Countries	15,745	21,349
Total	150,787	471,206
Timber (Sawn or Split, Planed or Dressed).		
Russia	66,385	166,446
sweden and Norway	126,928	313,365
British North America	131,708	377,034
Other Countries	11,000	37,060
Total	336,026	893,905
Staves, (all sizes)	9,446	54,022
Mahogany (tons)	2,158	20,608
Total of Hewn and Sawn	486,813	1,365,111

11 MONTHS ENDED 30TH NOV., 1882.

Timber (Hewn).		
Russia	291,928	612,021
Sweden and Norway	584,778	929,340
Germany	281,005	797,451
United States	150,170	522,469
British India	37,419	477,129
British North America	248,195	1,202,499
Other Countries	303,580	388,964
Total	1,897,075	4,929,873
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,151,571	2,908,194
Sweden and Norway	1,596,426	4,008,588
British North America	920,035	2,458,459
Other Countries	316,504	1,011,754
Total	3,984,536	10,386,995
Staves (all sizes)	118,704	608,107
Mahogany (tons)	33,227	323,446
Total of Hewn and Sawn	5,881,611	15,316,868

How to Recognize Good Wood.

Rankine says that there are certain appearances characteristic of good wood, to what class soever it belongs. In the same species of wood that specimen will in general be the strongest and most durable which has grown the slowest, as shown by the narrowness of the annular rings. The cellular tissue, as seen in the medullary rays (when visible), should be hard and compact. The vascular or fibrous tissue should adhere firmly together, and should show no wooliness at a freshly cut surface; nor should it clog the teeth of the saw with loose fibers. If the wood is colored, darkness of color is in general a sign of strength and durability. The freshly cut surface of the wood should be firm and shining, and should have somewhat of a translucent appearance. In wood of a given species the heavy specimens are in general the stronger and the more lasting. Among resinous woods, those having the least resin in their pores, and among non-resinous woods, those which have least sap or gum in them, are in general the strongest and most lasting. Timber should be free from such blemishes as "clefts," or cracks radiating from the centre; "cup shakes," or cracks which partially separate one layer from another; "upsets," where the fibers have been crippled by compression; "wind galls," or wounds in a layer of wood, which have been covered and concealed by the growth of the subsequent layers over them; and hollow or spongy places in the centre or elsewhere, indicating the commencement of decay.

AN ANGRY TREE.

A gentleman of this place has a tree which is a species of acacia. It was grown from a seed brought from Australia. The tree is now a sapling some eight feet in height, and it is in full foliage and growing rapidly. It is leguminous, and very distinctly shows the characteristics of the mimosa, or sensitive plant. Regularly every evening, about the time the "chickens go to the roost," the trees goes to roost. The leaves fold together, and the ends of the tender twigs coil themselves up like the tail of a well-conditioned pig.

After one of the twigs has been stroked or handled, the leaves move uneasily and are in a sort of mild commotion for a minute or more. All this was known about the tree, but it was only yesterday that it was discovered that the tree had in it much more life and feeling than it had ever before been credited with. The tree being in quite a small pot, one which it was fast outgrowing, it was thought best to give it one of much larger size. Yesterday afternoon the tree was transferred to its new quarters. It resented the operation of its removal to the best of its ability.

Arriving at his residence about the time the tree had been transplanted, the gentleman found the house in grand commotion. On asking what was up he was told that they had transplanted the tree according to orders and the operation had "made it very mad."

Hardly had it been placed in its new quarters before the leaves began to stand up in all directions like the hair on the tail of an angry cat and soon the whole plant was in a quiver. This could have been endured, but at the same time it gave out an odour most pungent and sickening—just such a smell as is given off by rattlesnakes and many other kinds of snakes in summer when tested. This odour so filled the house and was so sickening that it was found necessary to open the doors and windows. It was fully an hour before the plant calmed down and folded its leaves in peace. It would probably not have given up the fight even then had it not been that its time for going to roost had arrived.

THE Chicago *Northwestern Lumberman* says: The figures of the secretary of the Lumberman's Exchange estimate the total amount of hardwood now in stock in 21 yards of the city, at 37,500,000 feet, which is something of an increase over the summer stocks as indicated by the figures furnished from the same source. It is apparent that stocks are not observably diminishing, and that all season they have been replaced about in the ratio of current sales.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Nov. 30th, 1881 and 1882, and also the Consumption for the month of Nov., 1881 and 1882:—

	Stock, Nov. 30th. 1881.	*Stock, Nov. 30th. 1882.*	*Consumption for the month of Nov. 1881.*	*Consumption for the month of Nov. 1882.*
Quebec Square Pine	472,000 ft.	381,000 ft.	234,000 ft.	189,000 ft.
" Waney Board	388,000 "	271,000 "		
St. John Pine	5,000 "	5,000 "	Nil "	Nil "
Other Ports Pine	45,000 "	66,000 "	7,000 "	12,000 "
Red Pine	45,000 "	68,000 "	20,000 "	3,000 "
Pitch Pine, hewn	553,000 "	701,000 "	131,000 "	95,000 "
" Sawn	458,000 "	526,000 "	62,000 "	66,000 "
Planks	73,000 "	90,000 "	7,000 "	2,000 "
Dantzig, &c., Fir	33,000 "	38,000 "	23,000 "	9,000 "
Sweden and Norway Fir	13,000 "	21,000 "	12,000 "	—
Oak, Canadian	466,000 "	343,000 "	70,000 "	63,000 "
" Planks	136,000 "	137,000 "	20,000 "	52,000 "
" Baltic	68,000 "	43,000 "	— "	2,000 "
Elm	65,000 "	48,000 "	11,000 "	32,000 "
Ash	16,000 "	15,000 "	10,000 "	10,000 "
Birch	100,000 "	66,000 "	19,000 "	46,000 "
East India Teak	20,000 "	20,000 "	5,000 "	14,000 "
Greenheart	30,000 "	138,000 "	4,000 "	3,000 "
N. B. & N. S. Spruce Deals	18,034 stds.	16,806 stds.	8,808 stds.	8,476 stds
" Pine "	743 "	810 "		
Quebec Pine & Spruce Deals	10,283 "	8,058 "	2,648 "	2,978 "
Baltic Deals	3,349 "	4,630 "	517 "	392 "
" Boards	246 "	568 "	14 "	136 "
" Boards Flooring	1,960 "	2,718 "	672 "	816 "

ENGLISH PRICES.

The London *Timber Trades Journal* has the following article on "Present and Future Prices:"

"The letter of our Stockholm correspondent last week and the advices received from our other sources of information in Northern Europe admonish us that the season of shipping timber and deals for this country is virtually at an end for the year 1882. Open weather may prevail here and there, or an occasional thaw may for a brief while re-open a port previously accounted shut up; but only ships already loaded in the port or others near at hand, could avail themselves of such a chance, and even these latter would hardly expect to get out again before the ice set in, their advantage consisting in making a good loading port, to be in readiness for first open water in the spring, and possibly, if chartered, loading and lying under cargo till that time came around. To all intents and purposes, therefore, the import trade may be considered closed at its sources for this year, though at this end of the traffic a good deal may still be doing in the way of landing and delivering the latest shipments as they arrive. Nor is it easy to fix a period when it can be said that the last of this season's cargoes has come forward. Some ships that have got damaged on their homeward voyage will have put in somewhere for repairs, and on being again ready for sea will take the first opportunity to get away again if a favorable chance presents itself, and in Southern Sweden and Norway there are good roadsteads that are seldom obstructed by ice, such as Fredrikshald and Laurvig, where vessels can usually get away at any part of the winter, only that the short days and the insurance regulations of that country discourage native vessels from doing so during the dead of winter. But their first open water is counted to take place about the 20th of February by the insurance companies, when the more northern ports of the Gulf of Bothnia, and even the Baltic, are looking forward to be icebound for at least two months longer.

Looking westward we find the port of St. John, New Brunswick, equally favored in that respect over the other principal shipping ports of that province, Nova Scotia and the St. Lawrence. The great rise and fall of tides in the Bay of Fundy prevent any accumulation of ice, so as to close the port in winter, but there is generally for the reasons aforesaid, little doing in the way of timber export during the inclemency of that season, and we learn that, although freights for the United Kingdom are still quoted there, no new business is doing in that way just now, as it is not considered prudent to take up vessels at the rates now demanded.

From Quebec we learn that the ice is setting in, and no more vessels are likely to come down the St. Lawrence, nor are the lower ports likely to load any more vessels this year. In Europe, we learnt a week ago that the Finnish ports were closing, the river at Abo was blocked with ice, Uleaborg and Wyborg were both shut up, and the navigation considered closed on the eastern shores of the Baltic, nearly as far down as Stettin, which being rather earlier than usual seems to indicate the approach of a long and hard winter in those regions whatever may be in store for us at home. Thus it is made manifest that the shipping department of the import trade can do little or nothing more this year. It may also be said that every importer knows pretty well the sum total—or the maximum—that his supply can now amount to—that is if he has anything afloat—and his minimum will be determined by any accident at sea, which may prevent its arrival. It would therefore seem easy enough to calculate pretty nearly what will have to be added to the supplies already received at any particular port. But unfortunately this information is not to be obtained of any individual at places of large importation. Each merchant can tell what he has to arrive himself, but he cannot answer for his neighbors, and even those close observers who keep their eyes on what is going on, and whose ears catch the slightest whispers on the wind, till they think they could tell you on their fingers every timber ship afloat for their port, are not unfrequently thrown completely out of their reckoning by arrivals on consignment, or for merchants too remote, or apparently too inconsiderable, to have entered into their calculations. Thus it happens that there is always a degree of uncertainty as to how the season will terminate till the weekly list of arrivals thins down to a few stragglers, and finally comes to be disregarded as no longer having power to affect the markets.

This is the time, therefore, that the attention of the leaders of the trade is turned into a new channel. The vicissitudes of one season being at an end, let us see what the prospect is for the next, which will soon be upon us, and whether the salient points within the sphere of our observation are capable of guiding us to a right conclusion as to the kind of business that will be done when the shipping ports re-open, and how prices are likely to rule in order to render the demand in this country equal to the supplies which the shippers abroad are preparing for it. Our Swedish correspondent to whom we have already referred throws out some very useful hints in this direction in his letter of November 18th, published last week on page 356. He had already repeatedly dwelt on the heavy stocks accumulating in Sweden, notwithstanding the shipment this year of 100,000 standards more than in 1881, and in fact the largest export ever known from that country, and he now warns the millowners of the state of the markets abroad, in order to induce them to put some limit on the quantity to be cut this winter, if they do not desire to see prices go down in the scale below a remunerative point. But we all know to what this sort of admonition generally amounts. Everybody admits its correctness, but each in his own case is apt to find some excuse for not observing it. We all think that if we curtail our transactions, some neighbor in the same line will extend his in the same proportion, and the only result of our cautious reserve will be that he takes from us a part of the business which we ought to have done. "Besides," they reason, "are there not other countries which will flood the British markets by all that we refrain from shipping?" Then they resolve probably not to limit the cut so much as to try and diminish the cost of obtaining it. The apprehensions suggested form a good argument for abridging their expenses, and the lumbermen are informed that their services are not required to the customary extent and they can only be fully employed at a reduction of wages; so that, if prices must give way, the millowners may at any rate be able to suffer the abatement without being losers on the sales they effect. Though this may not be literally true of the state of trade in Sweden, it is towards this sort of conclusion that it is drifting by the force of circumstances and the present state of the markets, to which it looks for the disposal of its produce. And as Sweden, with which Norway is associated as the prime source of the British supplies of building timber, leads the other European shipping countries, we may assume that as great efforts will be made this winter as ever there were before to get as much timber forward for shipment next season as the resources of the merchants will enable them to accumulate at their respective wharves.

From our North American Colonies no great increase of supply is likely to come to market. There has been some falling off in the shipments thence this season, which it is too late now to make good; and as prices continue firm there, and freight is too high for speculative charters, it is likely that no more than a good legitimate business will be done from that direction next year. The south country pine, however, is irrepressible, and knows no diminution. It is said also to be growing in favor, and perhaps no timber imported is chargeable with less waste in conversion, as it can be bought square-edged in considerable bulk, and is seldom objectionable on account of coarse knots and shakes.

In the estimation of probabilities as to future prices we have always considered that this wood was hardly sufficiently taken into account; but it is a material which steadily operates against an advance of prices, and is likely to be a greater check on them hereafter than it has hitherto been. Old contract forms still demand the kinds of timber that have been held in preference for ages, because they were chiefly accessible in those days, but as the utility of pitch pine is more generally known, its cheapness in proportion to quality will have its natural consequence, and by and by it may be insisted on in place of other kinds that have hitherto been preferred to it. At all events, it is coming to this country in increasing quantities, and has to be reckoned with when we are estimating the probabilities of our supplies and the tendency of prices. If trade continues good—which is not now so flourishing as it has been—the prices of imported timber may hold their own at about the level of the present rates both abroad and at home; but there does not appear to be anything in the facts at present available to justify us in looking for better prices next year than the average of those which have been realized during the present.

THE TRADE IN QUEBEC.

Quebec, Dec. 13.—This morning's *Chronicle* has the following remarks on the lumber trade during the year:—

"In this, the chief trade of the port, we are informed that the season has been fairly prosperous. At the commencement of the season shippers had only very small wintering stocks to deal with, but these were augmented in June by the arrival of about three million feet of white pine from the Ottawa, the greater portion of which was timber of the previous year's make, stuck in the streams in consequence of the unprecedented lowness of the rivers, the balance being new rafts of small average; and all this was rapidly absorbed as the spring and summer fleet continued to arrive, so that when the main bulk of the new wood reached market, the merchants were comparatively bare of stock, a position which was turned to practical account by lumbermen who held on to their rafts until shippers found themselves forced to meet the position. Notwithstanding the comparative inactivity that was evident in the months of July and August, a reaction quickly set in when the fall ships began to make demands upon the limited stocks in shippers' hands, and during the following two or three months very large purchases were made by the trade at full prices, notwithstanding the inferior general character of the Ottawa pine this season. Really prime rafts are said to be quite the exception, and it is also equally rare to meet with rafts over 53 feet average, so great is the falling off both in size and quality, and it is said that this will become more apparent each year.

"Although we find at the close of the season that the stock of white pine is about two million square feet in excess of last year, it must be kept in view that this winter there is not a single raft left behind in the Ottawa streams, against about two million last year, and in addition to this, it is known that new timber will each year be later in reaching market, and very few rafts of the better class of white pine can possibly be delivered in Quebec before August. This remark stands good also as regards waney board, pine, oak and other hard woods from Western Canada, Ohio and Michigan. So that, regarded as a whole, the wintering stocks of timber in Quebec will be barely sufficient for the loading of even a small spring or early summer fleet.

"The enormous advance in the cost of all descriptions of labor employed in the woods, and the enhanced value of provisions will increase very materially the cost of production, and it has this autumn been almost impossible to obtain the usual number of skilled axemen, many manufacturers have curtailed their operations in consequence.

"Oak is low in stock, very little wintering at Garden Island, and the production of Ohio and Michigan wood is now in so few hands that it is not anticipated that this wood will ever be cheaper in this market than it is to-day, and the commoner description of Canada oak is not appreciated by the trade at even a heavy reduction in price.

"In pine and spruce deals we are informed that the English markets have been far from satisfactory, the London market especially having been paralized by large stocks of last year's importation remaining in the hands of certain importers there, and causing buyers to hold off in the belief that they would be able to buy on easier terms. Shippers must obtain higher values for both these articles if they are to continue to export them, and as the manufacture will probably not only be curtailed this winter, but the cost of production will be materially increased, an advance in price must follow. All contracts made for next year's delivery of spruce deals have been at an advance, and all the stocks of this wood are now in the hands of shippers.

"With the United States, trade in small lumber during the past season has been good, and anything for sale could be disposed of there for good prices. Lumber shipments to the River Platte are also on the increase, the majority of which are made from Montreal. Deal shipments to England by steamer are also largely made from Montreal, but all from account of Quebec shippers.

"It might be well to draw the attention of those interested in the deal business in Quebec to the very large quantity that have been shipped this year in Montreal, the chief inducement being that the cost of loading ships there is so much lighter than in Quebec, and both steamers and sailing ships give a decided preference to taking their cargo there. Montreal as a shipping port for deals will in consequence of this become each year more popular, and unless considerable restrictions are removed in regard to the labor question in Quebec it is becoming quite evident that this branch of business will go from us in a very short time.

"One feature which has told heavily against the trade this year has been the exorbitant rates charged by the English marine insurance companies, rates for which there does not appear to have been any proper justification, and it would seem to be a good time for capitalists on this side to establish a company or companies which will charge reasonable rates on all risks.

JUDGMENT REQUIRED.

The *Northwestern Lumberman* says:—To the unthinking, lumber is lumber, and they do not reflect that there is anxiety on the part of the manufacturer to turn out a season's cut that will all be called for. The lumber manufacturer must anticipate the future the same as the dealer in dry-goods or any other commodity. He is liable to have a large stock of certain sizes on hand that is slow of sale, and possibly will not sell at all except at a reduction that cannot be afforded, the same as the merchant in other lines is liable to have a stock of unsalable goods left on his hands. The general use of barbed wire for fencing has taught the manufacturer that he must saw less of his timber into fencing than he did a few years ago. He must anticipate the amount of building that will probably be done, and if he calculates wrongly the dimension is his yard will be a drug, or he will have orders for it that cannot be easily filled. It is seemingly an easy job to draw logs into a mill and slash them up into lumber, but it requires good judgment to know how to saw them into the sizes that will be most called for.

The Growth of London.

The *Timber Trades Journal* says:—

"Perhaps the readiest method of conceiving what the cosumption of wood in London must be is to make note of the fact that during twenty years the population increased from 3,222,000 in 1861 to 4,764,000 in 1881, or an incresse of 47 per cent. London, then, has been increasing at a rate nearly double that of the rest of England and Wales, which has increased at the rate only of 25 per cent. London has 100,000 more inhabitants than the whole of Scotland, and about 400,000 only less than the whole of Ireland, while it exceeds in population such countries as Sweden, Holland, and Portugal. Further than this must be reckoned the circumstance that during the past twenty years it has become a much more general practice to reside outside London. In reckoning the consumption of wood in the "Modern Babylon," the immensity of suburban London must be taken into additional account.

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TIRED OF SUFFERING.

An Ex Police Officers Story—The Agony is Over—"It Did Not Fail Him."

[*Sacramento (Cal.) Record Union.*]

Mr. M. Humen, proprietor of the Pioneer Store, No. 102 J street, is now one of the happiest men in Sacramento, whereas a short time since the fields for him strove in vain to look gay in their garb of winter-green, and the sunshine of California was as a glimpse of the midnight sun at Spitzbergen. He had the rheumatism. What man tortured with rheumatism can delight in in the beauties of nature or care a fig whether the sun shines or not? Mr. Hymen did not know what to do about it. He had taken the prescriptions of physicians, but the dull, dead ache and the horror and dread agony were still there. The heavens to him were as though covered with the pall of unending night. Others might smile, but Mr. Hymen found no cause to allow a ray of mirth to creep into his face. This sort of thing had gone on with him at intervals for years, and there seemed no help for him But the poet tells us that the darkest cloud has a silver lining. The darkest hour is always just before the dawn. There was help for him—relief present and permanent for his racked body. At last some one told him of the Great German Remedy, St. Jacobs Oil. "What! use a mere liniment, after exhausting the skill of doctors? Why, it is madness to talk of it!" "Well, just try the Great Remedy," said the voice of his friend. He tried it. "What is this?" Relief! He tried it again. More relief! "Is this the wand of the Magician? Yes, it is relief—sweet relief, after wakeful nights of agony and days long drawn out with "suffering?" At last he had discovered the solution of his trouble. He was cured. Since this happy recovery the gentleman cannot say enough in praise of the Great German Remedy. He advises all to use St. Jacobs Oil for rheumatism. He says there is nothing under the dome of the universe comparable to it as a pain annihilartor. His recommendations in the past few weeks have been the means of selling hundreds of bottles of the wonderful specific, and many are glad of the time when he urged them to use it. His was a wonderful cure.

Mr. W. B. Ferrall, the well-known policeman of this city, has also felt the powerful friendship which the St. Jacobs Oil extends in the hour of physical suffering. Mr. Ferrall was severely afflicted with rheumatism. He got tired of suffering, and determined to call in the aid of the grand old specific. It did not fail him. The disease was deep seated and declined to yield without a struggle; but the application of two bottles of the Oil made it fly away and cease from troubling. He is now well and hearty. He recommends the afflicted to rely on St. Jacobs Oil as the most ready and efficient cure for pain in the world. Captain O. O. Laraway, who runs that most thriving and well stocked grocery, corner of Sixth and N streets, is a great sufferer from neuralgia. While the reporter was in there the other day waiting his turn for supplies, the Captain told him that the Great German Remedy was a powerful liniment. It has relieved him of neuralgia, and given him many hours of ease. His clerk also owned to having had the backbone taken out of some ugly rheumatic pains which had possessed his legs, much to his annoyance, for some time.

The foregoing should convince even the most skeptical that the article in question is indeed a great remedy and conquerer of pain. "We endorse it," is heard on all sides.

TREE CULTURE.

A Minnesota farmer says:—I have five acres of young forest trees growing. Broke the land in 1875—6 and sowed to grain for three years, and planted to corn the next year, and trees planted in with the corn. Trees consist of cottonwood, box-elder, and Lombardy poplars. The cottonwoods are seedlings pulled up along the Redwood River, also the box elders; Lombardies were cuttings. The cottonwoods grew from three to five feet the first year. The box elders did not make much growth the first season, barely lived through. About two-thirds of the cuttings lived and made a growth of two feet. The cottonwoods have continued to keep the start, and are now from ten to twenty-five feet high and make a splendid wind-break. The box elders are doing well now, but do not grow as well as cottonwood, but make a fine shade tree. The Lombardies are growing fast now. I use the plow when they are small; after they get larger the cultivator; am careful not to cut the roots when cultivating. Have never mulched them; think good cultivation is better.

TROUBLES IN THE TRADE.

The Montreal *Star* of Dec. 13, says:—A meeting of the creditors of Messrs. W. J. Pope & Co., lumber merchants, of Charlemagne, P. Q., was held yesterday afternoon in this city, when a voluntary assignment was made to Messrs Thomas Darling and Charles Lacaille. A large amount of litigation may be expected in connection with the estate, as the assignees have been ordered to contest the deed of transfer of the establishment at Charlemagne and the timber limits to the Exchange bank and to Messrs. Brossard, Chaput & Co., which was made a few days ago. Immediately upon this transfer being executed, a seizure was taken out by the other creditors, the affidavit in support of which alleged that the firm was making away with its property with intent to defraud the creditors. Upon the action being taken the firm called the meeting of creditors alluded to above. The claim of the bank to the lumber will also be contested. This claim is based on the fact that they held warehouse receipts on the logs, which extend to lumber derived from them. The unsecured liabilities of the firm amount to $94,000, while the assets are nominally $83,000. In addition to this there are mortgages amounting to $36,500 on the real estate, which are fully secured. The majority of the creditors are in Montreal, the largest being the Exchange Bank, $50,000, and Messrs. Brossard, Chaput & Co. $15,000.

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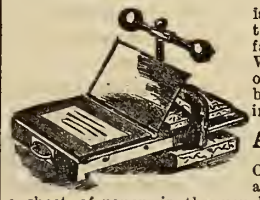

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Circular, Cross-Cut & Machine Saws
Gummed and Hammered on Short Notice.
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We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
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PROMPTLY ATTENDED TO.
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Permanently Cured—No Humbug—by one Month's usage of Dr. Goulard's Celebrated Infallible Fit Powder. To convince sufferers that these powders will do all we claim for them we will send them by mail, **post paid, a free Trial Box.** As Dr. Goulard is the only physician that has ever made this disease a special study, and as to our knowledge thousands have been **permanently** cured by the use of these **Powders. We will guarantee a permanent** cure in every case **or refund you all money expended.** All sufferers should give these powders an early trial, and be convinced of their curative powers.
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ASH & ROBBINS,
20L24 360 Fulton Street, Brooklyn, N. Y.

THE CANADA

LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JAN. 1, 1883.

A NEW VOLUME.

WITH this number we begin a new volume of the CANADA LUMBERMAN, and we cannot look back without congratulating ourselves upon the success of our venture, for such the establishment of a new journal always is. We feel that for this success our cordial thanks are largely due to our subscribers, correspondents and others who have given us support, encouragement and assistance, not forgetting that most important class in a business point of view, the advertisers who have favoured us with their patronage.

From our own observation and from the assurances of many gentlemen occupied in the lumber business we felt that there was not only room, but a demand, in Canada for a journal specially devoted to the interests of the trade, and the result has shown that we were not mistaken. To give an idea of the kindly appreciated of our labours we will give brief extracts from two out of many flattering communications we have received.

Mr. J. K. Ward, of the Mona Saw Mills, Montreal, writes :—

"We are pleased to receive the CANADA LUMBERMAN and to be counted among its readers. We receive other papers devoted to to the lumber interests, but none more acceptable than yours. We hope it will meet with all the success it deserves."

Messrs. Olmstead & Appleton, of Collingwood, write :—

"We are much pleased with your paper, being a journal much needed, and wish you every prosperity."

With such encouragement, other instances of which we might give, we feel nerved to persevere in our rather arduous task, and to make further efforts to render the CANADA LUMBERMAN in the future still more useful and welcome to the great industry whose interests it serves. We will conclude by thanking these kind friends and others who have given us their support in a more tacit manner, and to all of them we heartily wish a happy and prosperous New Year.

LARGE quantities of square timber for the ship yards, and spiles for docks, are being hauled into Bay City, since the snow-fall.

PARRSBORO', N. S., owns 17,000 tons of shipping, and over 16,000,000 feet of deals and deal ends were shipped from there this season.

THE River and Streams Bill which has been twice disallowed by the Dominion authorities has been introduced a third time in the Ontario Legislature.

CUTLER & EDDY will get out 3,000,000 of cedar logs in the country around the St. John river, on the borders of Maine and the province of New Brunswick, where operations are heavy. They will turn out 30,000,000 shingles.

A Kingston despatch says Mr. P. McLaren's Mississippi saw mill is to be doubled in capacity, and laths, shingles, and pickets manufactured. This will be the centre of McLaren's operations for the cutting of lumber and timber. The chief depot for the shanties is near this place.

A DESPATCH from San Francisco, dated Dec. 22, says :—San Francisco, 22nd.—The coast survey steamer has returned from a seven months survey of the southern coast of Alaska, where several excellent harbours were discovered. The officers speak enthusiastically of the timber resources of that region.

IT is said that Mr. James Bethune will go to England at the end of January to move before the Judicial Committee of the Privy Council for leave to appeal from the decision of the Supreme Court of Canada in the celebrated case of McLean *vs.* Caldwell. This is the case in reference to the use of streams by lumbermen.

THE *Northwestern Lumberman* says :—Hurd, Hotchkiss & McFarlane, the Adirondack wilderness invaders, have made an application to the state land commissioner at Albany for all the unsold lands belonging to the state, aggregating 4,584 acres in township 14 Franklin county. The land was ordered sold at $2 an acre—cheap enough.

North and South says :—It is stated that a western furniture firm has sent a man to the Piedmont region of the south and thereabouts with orders not to return until he has secured 100,000 acres of suitable woodland; while others are taking similar action. The value of southern timber is gradually becoming known. About the time all the choice woodland in the south is gobbled up by western and eastern investors, our own people will become conscious of what vast wealth we possess in our forests.

ON a tract of pine near Grayling, Mich., owned by Englemann and C. B. & E. C. Lewis, two camps are located. There are 70,000,000 feet on the tract, which surrounds a lake that is five miles long, and at the nearst point three and a half miles from the Manistee river. Into this body of water the logs will be rolled, and towed to the point in question, from which a railroad will be built connectiong with the river. The logs will be drawn from the lake and loaded on cars by means of an endless chain.

THE London *Timber Trades Journal* says :—Holders of spruce deals express the utmost confidence as to prices. The opinion has been openly expressed by large holders on the west coast that they will yard and hold rather than accept any other than renumerative figures. It is said that even this side of the new year we may possibly see a small advance occur. A member of a leading firm of west coast importers has remarked that he confidently anticipates that £9 will be realized during the early months of the forthcoming year,

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THE Manistee *Democrat* says :—A quarter of a mile of railroad track is being laid from the new depot grounds to the edge of the lake, just north of M. Englemann's saw mill, for his use in shipping lumber and bringing logs to his mill. He has contracted with the F. & P. M. road to haul 3,500,000 feet of logs from Chase to his mill this winter.

A RECENT work on Florida says :—It is a fact familiar to lumbermen in Florida that less than thirty years is necessary to restore to land once cut over a new supply of mill stocks. Indeed, it has been authoritively asserted by parties familiar with the premises that in the country tributary to Pensacola, even with her immense mill capacity, the timber grows faster than it can be cut off.

THE Montreal *Gazette* informs us that :—"Lumbering operations on a large scale are being proceeded with in almost all sections of St. Francis District. In the township of Stoke a large amount of spruce deals are being got out, the lumber in the log to be driven to Windsor and sawn there for the Quebec market. The British American Land Company are also operating largely in the township of Orford for their mills in Sherbrooke, the Berlin Mills Co. at Lake Megantic and Messrs. G. B. Hall & Co. in the same locality on the Chaudiere."

AT Ottawa, on Thursday, Dec. 21, the timber limits belonging to the firm of Thomas McTiernan & Co., which have been the subject of litigation for nearly three years, were sold under an order of the Court of Chancery, and the prices obtained were the highest yet reached in this district. Thirty square miles were sold to Perley & Pattee for $78,000; 50 square miles to Mr. J. R. Booth for $61,500; another lot of 50 square miles to Mr. Booth for $46'500, and a further lot of 15 square miles to the same gentleman for $22,100. The total amount realized was $208,100.

A VERMONT correspondent of the *Northwestern Lumberman* says :—Our forests are being cut over too fast. Ten years at the same rate of cutting will exhaust the spruce forests of northern Vermont, and we cannot now see what is to take the place of lumber, or where a supply is to come from. From careful inquiry, I think that in this little north corner of Vermont we produce fully 80,000,000 feet of spruce, besides hardwood lumber and cedar shingles to a considerable extent. In addition to this, some 40,000,000 feet are taken from our state and run down the Connecticut river to Massachusetts and Connecticut yearly.

THE *Lake Superior News* says :—The lumber business of Duluth is by far the most important industry yet developed here. To show our readers how this business has increased we would state that during the winter of 1880 only about 80,000,000 feet of logs were got out in this district, and last winter 175,000,000 feet were cut—showing an increase in 1881 of more than one hundred million feet over the cut of 1880. This year there is a corresponding increase, the total being 312,000,000 feet, showing an increase for this year over last of 137,000,000. Itemized reports from the different camps show that there are some 3,500 men at work, a good sized army, but some put the number of men in the woods as high as 4,500.

THE *Lake Superior News* says :—A number of Michigan men are reported to be in Duluth trying to purchase mill sites. There is plenty of chance to buy such property in Michigan and we venture to say we can show up a better mill site here on Portage Lake, by a———site, than any they have in Duluth.—*Hancock Journal.* It is quite evident that the editor of the *Journal* has never visited Duluth or he would never talk in such a reckless manner as the above. We would like to inform him that no place on Lake Superior has as desirable sites for saw mills as Duluth. Again Mr. *Journal*, lumbermen desire something more than good sites. They want a good market and a vast supply standing pine, And this is the reason Michigan men are coming to Duluth insted of locating on Portage Lake,

PACIFIC COAST REDWOOD.

The wastefulness of this lumbering is one of the striking features of the scene. Only the largest trees are cut, those measuring less than two feet in diameter rarely being touched, and the axe is laid, not to the roots (though they are not thick and widely divergent, considering the height and weighs they support), but some distances above, so that in very large specimens the massive stump, upon whose flat top you might build a comfortable house, stands ten or twelve feet above the ground, and contains hundreds of feet of sound lumber, which must be left to rot or burn. Then many trees are broken by their fall, so that large parts of them are useless; other parts may be knotty, or crooked, or inconvenient to drag out, and so only half of a great trunk will be utilized. Huge logs are consumed, also, in road-making and bridge-building in the hills, and dozens of small trees are crushed by the fall of their greater companions. Then, when a district is pretty well cleared of its best timber, fire is set in the bush and prostrate trunks. Feeding eagerly upon the resinous woods, half dried and broken, it gathers so much heat that the saplings are nearly all killed, and the flaky tinder-like bark of the larger trees is singed in a way which must greatly injure and often destroy them. Moreover, these fires, fanned by the gusty breezes rushing in every afternoon from the ocean, often get beyond control, and sweeping through the oily tops and brittle trunks, spread blackened ruin over miles and miles of precious forest. *Precious*, however, it seems never to occur to the lumberman these forests are; yet he is probably no more wasteful and careless here than elsewhere, and finds his match for heedless extravagance in nearly every pursuit that deals in what nature furnished us at the outset in abundance, but replaces only very slowly, giving abundant leisure for our repentance. The spendthrift lumberman is bad enough, but no worse than the wasteful oysterman or buffalo-hunter, reckless of the future. It is, or ought to be, a matter of rejoicing to everybody that the Forestry people, under Mr. Sargeant's guidance, are paying especial attention to preserving as far as possible the magnificent forest of the Coast Range.—Ernest Ingersoll, in *Harper's Magazine.*

A HOLIDAY SLAUGHTER.

The *Northwestern Lumberman* says :—The spruce and fir forests of Maine are now suffering extensive inroads to supply Christmas trees and evergreens for the holidays. The business is particularly heavy along the line of the Knox & Lincoln road, having grown to an important extent year by year. The trees leave the state at the rate of many carloads a day while the holiday traffic lasts, and, as everybody knows, are used in a variety of ways for trimming stores, churches public places, homes, etc., before the conventional Christmas eve arrives. The state of Maine is a main source of supply, though evergreen is obtained from various sections of the country, The supplies have been so drawn upon that the forests are showing it, and the sacrifice continues, and will so long as people cry for luxury, and the handlers can coin money, as many do at present. If 100,000 young trees were swept away yearly, even in Maine alone, it would be only the conservative and sensible ones who would lament. The merry-makers rarely reflect that they are denuding more of nature's tree store for one item of general enjoyment than all the forestry societies in the country could replace in years. Warren is one of the great distributing points in Maine for the sale of evergreens for Christmas, and scattered through the state are several firms doing an immense business.

TROPICAL TIMBER.

The furniture and dye-woods that abound in the forests of the West India Islands, on the bays, inlets and rivers of the Carribean coast of northern South America, and in the maritime regions of Central America, Guatemala, Yucatan and Mexico, have for over 200 years been an important feature in the commerce of America and Europe. The forests that supply these woods have been cut away along the tidewater to such an extent that it is now more costly than it was to get the timber to places of ship-

ment, and the governments of the several Spanish American republics that embrace these forests are making efforts to ccustruct railroads from the seaports to interior points. British Honduras, Guatemala, Spanish Honduras, Costa Rica, Nicaragua, Colombia and Venezuela are awake to the importance of railroads, and lines are in progress of construction in those countries that will penetrate their vast forests, and bring to the coast cedar, sapodilla, mahogany, zapote, fustic, logwood, and all the varieties of furniture and dye woods. These countries abound in valuable woods, not yet kuown to commerce, that will be brought to view when the localities in which they grow are opened up by railroads. Within the last three or four years several enterprising merchants of New Orleans have turned their attention to this valuable trade. The house of H. Otis sent men into various intertropical countries to procure their peculiar woods, and purchased several schooners to freight them to the New Orleans market. Since this undertaking the trade has greatly increased, and the dealers at the Crescent City hope to rival eastern markets in this branch of commerce.—*Northwestern Lumberman.*

FORESTRY.

The Chicago *Lumber Trade Journal* says:—Much valuable reading has of late been published in reference to the relation of the influence of forests upon streams, and those who perhaps kuow best, from a scientific standpoint, urge a consideration upon the most plausible ground. Ample and commanding illustrations to support their assertions have been produced, with many facts to which the thoughtful are inclined to attach weight.

It is within, doubtless, the memory of many observing men who have from necessity been constrained to plant trees after settling in a section where there was no timber to recall the moisture that followed dryness of the soil, when the small sprigs or the seeds which they had planted or sown years before were grown to a considerable size, owing of course to the nature of the leaves of the trees to retain moisture. Wherever there have been forests, streams of every size could be seen, but just in the ratio that the timber was removed in any quantities the streams diminished in volume, until not a few instances bore witness of the complete disappearance of the water almost simultaneous with entire depletion of the forests. The truth of these very instances were in some cases corroborated by the dried channel filling up with water, when after some years the old forest land again reveled in the product of new trees.

This points strougly to the necessity of not merely reforesting for the supply of material which will always be needed in the construction of building and improvements, but because of the varied mechanical and commercial enterprises which rely upon the river. The past in this respect holds out to the present an ominous warning which wise discretion will heed and obey, and instead of lands disrobed of the great timber resources, we will be able to see in teeming forests the fruitage of wise judgment and careful work.

ADDITIONAL IMPROVEMENTS AT THE TANITE CO'S. WORKS.

It is only a few months ago, that we chronicled the enlargement of the Tanite Works by the addition of several large building, which are moreover among the most substantial structures of the kind in the county. But "Tanite" is a synonym for busy activity and energetic progress. It would be unusual for a monthly visitor to fail noting on each return some important improvement. The new store house, 24x40, two stories and attic, which became a necessity with the rapidly increasing amount of work turned out, is now thoroughly finished. The Company have also just built a new casting shed 16x30, one story high. They have also just completed the extension of the boiler shed, adding 19 feet to the original one, which is now 50 feet long. They have just put in place a new horizontal boiler, built by Tippet & Wood, of Philipsburgh, N. J. It is one of 65 horse power, fifteen feet long and five feet in diameter. It has 45 tubes which are four inches in diameter. This boiler is in addition of course to one of the same size in present use.

They have also just added to their machinery a new Worthington double acting steam pump, to be used as an auxiliary to the "Niagara" (Campbell & Hardick) pump now in use, both for boiler feeding and for use in case of fire.

A REMARKABLE INVENTION FOR THE MANUFACTURE OF SIDING.

The *Lumberman's Gazette* of Bay City, Michigan, says:—The manufacture of rift-sawed siding is becoming quite a prominent industry in Manistee, and already several machines have been invented for its production. Only a little while ago Horace Tabor came out with a machine, and was followed very closely by S. Babcock with another. And now along comes another, the product of the inventive genius of R. G. Peters.

Mr. Peters' machine differs principally from the others in that the siding is manufactured from the whole log—the other machines requiring that the logs first be quartered.

When the log is rolled on the carriage a couple of jacks, directed by a lever in the hand of the sawyer, elevate the log to the proper height, and it is then fastened in the centre of each end by stocks, which are connected with the set gear. The set is so arranged as to give any desired thickness or taper. The log revolves around until it is entirely circled and cut into siding. Two saws are on a perpendicular shaft and cut the siding the proper width, while another on a horizontal shaft cuts it from the log. These saws are in an adjustable saw frame, and can be raised and lowered in a instant, to accommodate any size log. If the log is large enough, after the first cut around is made, the saws are lowered and the operation repeated until there is nothing left but the heart, which is invariably consigned to the shingle mill and is there manufactured into shingles. The machine also cuts flooring as readily as siding. Its capacity is put at 30,000,000 feet of siding per day.

The chief advantages in the manufacture of rift-sawed siding are, that more clear lumber can be got out of a log than by any other means. The saw cuts toward the centre of the log, and of course does not cross the knots. The siding is not nearly so apt to warp or check.

Lumbermen in St. Louis.

ST. LOUIS, Dec. 20.—Seventy-one persons representing the lumber interests of Michigan arrived here to day. They represent firms in Grand Rapids, Muskegon, Grand Haven and other western Michigan points which are handling 1,250,000,000 feet of lumber annually. The lumber stacked up awaiting shipment in the cities of Muskegon, Whitehall, and Grand Haven, and Spring lake amounts to 300,000,000 feet and the furniture interests of Grand Rapids alone amount to $6,000,000 annually, To-day these dealers met the lumber dealers, planing mill owners, and heavy furniture dealers of St. Louis and entered into direct business relations with them. The new departure is made practicable by the extension of the railroads throughout the western part of Michigan and the connections just made with the Wabash and other lines, the enterprise of the lines most interested and the readiness of the wide-awake business men of the region to improve an opportunity. The excursion will be continued to Kansas City, and the delegations will return by way of Chicago, whose lumber dealers will by this new move be cut out of a vast amount of business.

A Camp Scourge.

The hardy pioneers who first settled the country north and west met with untold hardships and perils. They not only had the wild animals of the forest to contend with, but were opposed by savage hordes. All that they suffered in various ways will never be known. In those days men went abroad and took their chances on what came, but such has been the advance in civilization that a single panther in a section of pine woods will scare the gall out of all the loggers in the district. Near a camp in the vicinity of Grayling, Mich., one of these animals has recently been several times seen and heard, its wild half-human cry falling with a chill on the ears of those who heard it. One of the men became acquainted with the savage cat in a way that he did not appreciate. While standing on the banking ground he observed the animal swiftly stealing toward him with characteristic slyness. Reaching a point a few feet from him it crouched for a spring, the swish of its tail sounding ominous enough to the unarmed man. At the right moment the cries of a number of men who came up frightened away the panther. The men have now become so thoroughly frightened that one of them could not be hired to go away from camp after dark.—*Northwestern Lumberman.*

Sale of Timber Limits.

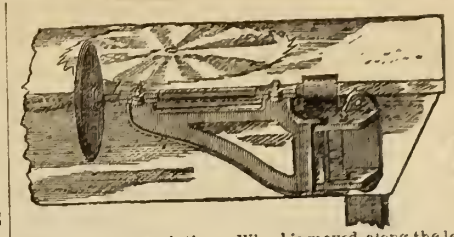
The Ottawa *Citizen* of Dec. 22nd, says:—This afternoon the timber limits belonging to the firm of Thomas McTiernan & Co., and which have been the subject of litigation for nearly three years, were sold under an order of the Court of Chancery in the suit of McTiernan *vs.* Fraser. There was a large attendance of prominent lumbermen from the Ottawa Valley, and the bidding was very brisk. The sale was conducted by Mr. W. M. Matheson, the Master in Chancery here. The prices obtained were the highest yet received in this district, although the limits are very valuable. Parcel No. 1 containing thirty square miles, was purchased by Messrs. Perley & Pattee, for $78,000. Parcel No. 2, containing fifty square miles, to Mr. J. R. Booth for $61,500. Parcel No. 3 containing fifty square miles to Mr. J. R. Booth for $46,500, and parcel No. 4, containing fifteen square miles, to Mr. J. R. Booth for $22,100. The total amount realized was $208,100. The terms of sale were ten per cent cash, twenty-five per cent within twenty days, and the balance within four months from date of sale.

Hogs and Young Pine Trees.

A correspondent writing from Johnsonville, S. C., incidentally mentions a curious instance of the influence of animals in controlling or preventing forest growths. It appears that the fondness of hogs for the juicy roots of young pines leads them to seek them assiduously, so that where hogs are allowed to roam in that region one can hardly find a young long-leafed pine in a thousand acres of pine forest. There being no young trees to take the place of the old ones used up by the lumbermen and turpentine gatherers, that species of pine timber is rapidly being exterminated.

THE recent fire in Kingston, Jamaica, has created quite a demand for vessels to load lumber for that port. Four have been chartered from St. John, N. B., within a few days.

THE Orillia *Packet* says:—Mr. P. Christie has a number of men employed in framing timber for a new mill, to be erected upon the site of the old one at Sturgeon Bay. The new mill will be 44x100, and have a capacity of about 40,000 feet of lumber per day. It will also contain 2 shingle and 1 lath machine, all provided with the most modern improvements and facilities. Mr. Christie expects to have his new mill ready for manufacturing next March. During this winter he intends to get out a large stock from his extensive limits and now has actually four camps in operation, as well as many jobbers at work. A well known Orillian, Mr. W. E. Armstrong is mill foreman, which position he has held for nearly three years.



To MILLMEN!

HODGSON'S
Patent Saw Grinder

Is a new, efficient, and exceedingly cheap machine and is equally well adapted to grinding long and round saws of every description. Wheel is moved along the length, and in the depth of the tooth, and can be placed just were wanted as easily as a file. It is just THE THING for mills, cutting from one to five million feet of lumber, and costs no more than one-fourth to one-tenth the price of little better machines. It is patented in United States and Canada, and is made in Welsport, Pennsylvania, and in Amherst, Nova Scotia.

Hodgson's Patent Monitor Shingle Machine

combines, at a moderate price, more points of excellence than any other. Jointer is built in machine, a few inches from the saw. The cast steel feed rolls are opened by a foot lever, and grip the block like a vice. Traverse of carriage to suit large or small stock, is under control of operator when running. Will run for days without cutting a shim. Warranted to cut, with one attendant, three thousand in an hour, under forfeiture of $100. Send for circulars to

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A PARTNER that understands the SAW MILLIN BUSINESS, with capital. For information addre JAMES B. DICKSON, Pembroke, Ont. 21

MINNESOTA

PINE LANDS

FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF

8,000 ACRES

Of PINE LANDS, in St. Louis County, Minneso carefully selected and estimated to cut **FORT MILLION FEET**, well located on good drivi stream, tributary to Duluth.

A. McCALL,

6L1 Lumber Merchant, Simcoe, O

QUEBEC.

The *Chronicle* of Dec. 14th says:—The annual trade circular of Messrs. J. Bell Forsyth & Co., merchants of this city, has just been published at our office. As usual this valuable *resume* of our most important branch of trade is carefully and reliably compiled, and reflects the greatest credit on the house of our enterprising townsman, from whose establishment it has been issued. The circular shows at a glance, the supply, export and stock wintering, together with comparative statements, current prices, &c., &c. We need not impress on our readers the advisability of their securing their supply of copies early in the day, so as to meet the outgoing mail steamer for Europe, which leaves Halifax on Saturday next. Meanwhile, we must take a rapid glance at the contents of Messrs, Forsyth's circular. There has been considerable falling of in the number of arrivals of ocean steamships as well as of sailing ships, dnring the year, but the number of vessels trading to the lower St. Lawrence and Maritime Provinces, on the other hand has increased somewhat. On the whole, the year now drawing to a close, has been a satisfactory one to our business men, all things considered. There has been no over production, and the trade in lumber and timber as a rule has been conducted on a sound and healthy basis. The manufacturers have been especially successful, and the past winter has been propitious for operations in the woods. The season opened without much request for white pine, the great staple of the Quebec trade. The export houses were apparently well-supplied, and the outside demand was limited, and beyond a few rafts which had been contracted for during the winter and early spring few transactions of any volume took place until about August, when something better was reported. Some lots were disposed of at fairly renumerative prices to the producers, and by the end of the season but few lots remained for sale in first hands. The present stock wintering, though somewhat in excess of that of last year, is under the average, and shows the whole quantity available for spring and summer needs. There is still a difficulty, noted in the circular, in procuring first-class wood, and many of the old limits have become exhausted or have passod iuto the hands of mill-owners. A portion of the new and more remote timber regions has been, up to the present time, inaccessible to the lumberman. In the stock reported to be on hand, there is a larger quantity than usual of inferior wood. Much of this, however, will be utilized in the extensive public works and other improvements now in course of construction. The estimates of the probable "cut" on the Ottawa and St. Lawrence for this winter, show that the supply for 1883 will not more than equal that of 1882, premising that the entire crop reaches market next season,—a supposition by no means certain. The demand for Canadian white pine has been very fair throughout Great Britain, and the stocks at present held in the priucipal markets there, are light.

This comparative statement shows the supply export and stock of white pine during the years 1881 and 1882:—

		Supply	*Export.*
1882	Square ..... 8,053,086 Waney 3,127,129		7,912,160
1881	Square .....6,029,041 Waney 3,065,274		9,101,880
		Stock.	
1882	....	6,532,152	Square
	....	3,354,943	Waney
1881	....	4,526,102	Square
	....	1,519,950	Waney

In red pine, the supply, though light, has been ample, and the stock largely composed of indifferent quality. Choice wood of good average and girth has been in fair demand, but small and inferior wood has not gone off well, considerable difficulty being found in placing it. In many instances the prices realized could not have proved remunerative to the manufacturer. The decline in shipbuilding has stopped the demand for very common wood. Small quantities continue to be sold, however, for local purposes.

	Supply.	*Export.*	*Stock.*
1882	1,474,871	1,024,680	2,362,624
1881	1,945,720	922,000	2,145,833

In oak, we learn that there has been good demand for prime wood, just now a scarce article. The difficulty in obtaining choice standing timber, the increased cost of manufacture, and the high freights, have made serious inroads in the profits of the producer, though rates have lately assumed a slight upward tendency.

	Supply.	*Export.*	*Stock.*
1882	1,316,719	1,957,320	1,362,153
1881	2,994,477	1,883,360	1,916,622

The market for elm opened out very dull, and timber was sold at unprofitable rates, but towards the close of navigation prices improved a little, and to-day are reported firm for next year's delivery. The indications at present seem to augur a light production.

	Supply.	*Export.*	*Stock.*
1882	 714,549	778,360	530,611
1882	1,027,670	797,160	499,912

Good large white ash is scarce and commands a fair price, while small and inferior wood is neglected. In 1881 the supply was 408,798 against 310,769 in 1882, while the export and stock amounts are shown as follows:—

	Export.	*Stock.*
1882	297,040	212,422
1881	355,680	210,101

In birch, the stock is light and difficult to procure in any quantity, while the production for next season's delivery is very uncertain. This table exhibits the state of the market:—

	Supply.	*Export.*	*Stock.*
1882	261,920	513,680	78,413
1882	110,488	273,880	51,092

Pipe staves have been scarce and in request throughout the season. A considerable advance in prices has taken place, while puncheon staves have also been in fair demand.

1882	Pipe..... 585	450	293
	Pun.....1,430	850	1,007
1881	Pipe..... 418	480	226
	Pun 671	602	280

In pine deals the state of the trade is thus epitomized. In the early part of the season there was a very fair demand, but during the summer months there was less enquiry. Towards the autumn, however, a much better feeling prevailed, and this has been maintained up to tho present time. The deals wintering, though heavier than last year, should probably reach higher rates than latcly current, from the enhanced cost of manufacture, the light stock held in the United Kingdom, and the great demand for sawn lumber of all descriptions for the American markets. The stock wintering in Ottawa is very light.

	Supply.	*Export.*	*Stock.*
1882	4,611,875	3,148,688	2,507,704
1881	4,253,285	3,876,187	1,708,597

In spruce deals Messrs. Forsyth report that owing to exceptionally high waters the rivers were entirely cleared of logs, which led to a larger manufacture than in 1881. The mills have no reserve of logs and must depend entirely on this winter's manufacture. Thero has been a good demand, prices being fairly upheld, and little or no stock remaing in first hands.

	Supply.	*Export.*	*Stock.*
1882	3,239,960	2,787,309	1,012,920
1881	1,590,487	3,097,342	810,028

THE MONSTER TREES OF CALIFORNIA.

As regards the wonderful size of the Sequoia, that is a matter which does not at first fully come to one. The fact is that all the trees are so large that one fails to realize the magnitude of the giants. It requires a mental education to convince one's self that the transformation is something quite out of the common. It is only when you come to walk in and out of the hollow trees, and to circle around them and take a constitutional by walking alongside of a fallen giant, or perhaps, (if it has done duty as a chimney before it came to grief) by riding up inside the hollow for a considerable distance, that you begin to understand their size. You do so best when, standing on the ground beside a prostrate tree lying buried in a ditch of his own making, you look up at a red wall rising perhaps 15 or 20 feet above your head, bulging outward considerably and extending in a straight line for 300 feet aloug the ground, and tell yourself that it is only a tree! The owners of the beautiful grove near the hotel have erected tall ladders to enable people to climb on to some of these heights and walk along the fallen trees as if on garden terraces. It sounds cockney, but it is decidely pleasant to gain a view of the forest from an elevation of 30 feet, and it is not every one who can scale the red rampart without the aid of the ladders. If you choose to clamber along the upturned roots you may find an airy seat some 40 feet above the ground. This sounds high, but on further consideration you begin to marvel how such extraordinarily small roots can ever have formed a fit pedestal for so ponderous a weight. They have literally no depth and a comparatively small spread, so they have merely a superficial hold on the earth's surface. Yet this slight support has enabled these huge bodies to resist the wild storms of many centuries. All the big trees of the district are concentrated in two groves, namely, the little forest gem of Calaveras, and a much larger belt known as the South Park Grove, on the Stanislaus river, about six miles further. In the Calaveras grove on the Sequoias lie within an area of 50 acres, over which space about 100 lie scattered singly or in groups. Of these 20 attain a circumference of about 80 feet near the base, and one, which is distingushed as the Father of the Forest, is found to measure 110 feet around; it now lies prostrate, and has apparently done so for many a century, for the well-nigh imperishable wood is in part decayed, and long use as a chimney had burned out its inside and destroyed its summit ere it fell. The portion that still remains is like a long mountain, and two large archways have been cut into the side of the said mountain in order that those whose taste lies in that line may ride into the hollow trunk and come out by the further opening. It is estimated that the tree, when perfect, must have been about 450 feet in height. Of the trees now standing four exceed 300 feet in height, and one measures 325. About 25 are said to exceed 250. One can, perhaps, better realize what these mean by finding the amount of house-room to be obtained within a hollowed tree, Several, such as "Miner's camp," and "Pioneer's camp," have been used as temporary houses. In the latter 50 persons can find sitting room; others are used for stabling horses.—*G. F. Gordon Cumming in the Gentlemen's Magazine.*

KILN-DRIED LUMBER.

When the question of a dry-kiln or no dry-kiln comes up, the up and dressed lumberman, under certain conditions decides it in the affirmative. Often it is for the lumber manufacturer to say whether his money shall lie for months in the board piles, being all that time unable to meet the requirements of the trade, or whether he shall invest in a kiln, and thus be able to turn the cut of his mill into cash at an early day. The interest of the money locked up in several million feet of lumber while it is air seasoning, would in a short time erect a kiln; besides it is a good deal of satisfaction for a business man, who tries to be worthy of the name, to be able to fill orders promptly and satisfactorily. The oaths wafted out upon the breeze by distant dealers who are obliged to pay a great many dollars every year for transporting water, when they ought to pay for carrying lumber only, would make a huge volume if collected. With some manufacturers there is a strong opposition to kiln dried lumber, but the feeling in favor of it is growing. A year or so ago, a firm of Boston builders put up a very fine house finished with hardwoods. It was supposed that the lumber was thoroughly seasoned, but the furnace heat played havoc with the work to such an extent that the owners of the building called upon the contractors to make good their job. To do so was expensive, and they now declare that for the good of their own pockets they will hereafter use no lumber forsuch finishing that has not been properly passed through the dry-kiln. The lumbermen in the South, who are oftener than otherwise obliged to ship long distances, feel the need of kilns, aud it is safe to predict that a great many will be erected south of Mason aud Dixou's line within the next year.—*Northwestern Lumberman.*

CROSS-PILED LUMBER.

The *Northwestern Lumberman* says:—The Muskegon mill men cross piled, the latter part of the sawing season, uearly 150,000,000 feet of lumber, or a quarter as much as was cut. It was piled at the mills because the Chicago market would not take it at prices satisfactory to the manufacturers. To-day, an houest count would name 800,000,000 feet as the amount of lumber in the Chicago yards. A good winter's trade will lessen this large stock materially. With such a trade, the Chicago dealers would want the Muskegon cross piled lumber on, or soon after, the opening of navigation. The Muskegon men have said by their actions, which always speak very plainly, that they will not sell the product of their mills at the prices which ruled during the later fall months. Acting on the same principle, should lumber be no higher next spring, they will then refuse to sell. The Chicago dealers are of the opinion that the Muskegon men may not be able to run their mills for several successive seasons and cross pile the products of them, and the Muskegon men are confident that things will so shape that next spring the Chicago men will take tbe cross piled lumber at prices satisfactory to the seller, and thus make room on the docks that can be utilized whenever there may come another depression. There is more than one man in Chicago who is interested in these different phases of the question, and the same may be said of at least one man in Muskegon. Time will decide them. It is impossible to tell which way a cat will jump until the bag is untied.

VALUE OF HEMLOCK.

The *Northwestern Lumberman* says:—Hemlock, that has beeu considered the offal of the forests, is gradaully asserting its rights. In the East, where it has been used all along, it is increasing in value, builders appreciating the fact, more than ever, that in many instances it can be used in place of pine; and the cost of it is much less than pine. The hemlock timber of Michigan and Wisconsin has been looked upon as almost worthless property, but the men who own it are disabusing their minds of that idea, and are alive to the fact that not many years hence it will figure as a valuable wood. They are not so ready to give it away as they were even two years ago. There is probably hemlock enough in Michigan to supply the mills of the Northwest with their yearly stock of logs for five years, and in due time every tree that will produce merchantable lumber will be wanted. Long before the exhaustion of pine it will be learned that hemlock has been unjustly despised, and when the end of the pine shall be near at hand hemlock lumber will sandwich in admirably.

Tapping the Timber.

A railroad company has recently been organized in Wisconsin to construct the Wisconsin, Pittsfield & Superior railroad from Remington to Dexterville, in Wood county. It is understood that the road is to be built in the interest of the Chicago, Milwaukee & St. Paul road, to form a part of that system when completed. The line will at present extend no farther than the northern part of Wood county, notwithstanding its Superior name. The main purpose of the line is to tap a section covered with valuable timber.

Rough Siege Laid to Him.

Mr. James O. Neville, the well kuown General Import and Export Agent of the "Allen Line," and General Dominion Shipping Agent, of 538 Dorchester street, Montreal, is an active member of the Shamrock La Crosse Club. "While on a late exhibition trip to the States," said Mr. Neville to the writer "my old foe, the rheumatism, attacked me, and gave me a rough siege. I suffered with the ailment all though my trip and long after my return home. I tried several remedies and found them entirely useless. Having read the indorsements of well known people who had used St. Jacobs Oil, and been cured thereby, I determined to give it a trial. Upon the first application, I saw at once it was what I required. In two weeks time I was as well as ever, and fully able to attend to my business. I have not had the least suggestion of rheumatism since. It certainly is a remarkable remedy and one that seems to me to be infallible."

A CURE FOR CROUP.—There is no better remedy for Croup than Hagyard's Yellow Oil taken internally and applied according to special directions, this is the great household panacea for Rheumatism, Stiff Joints, Pain, Inflammation, &c.

W. T. BRAY, Pharmacists, Wingham, Ont., writes that the sale of Burdock Blood Bitters have very largely increased in that locality, and adds that he hears very favorable opinions expressed regarding it, and if time permitted could send many names of benefitted parties.d,

Chips.

NEARLY 1,000 men are at work in the Adirondack wilderness this winter in the employ of two firms.

ANGUS & BUCK have nearly completed a chemical pulp mill, at Angus, Que., 16 miles from Sherbrooke on St. Francis river.

THE Duluth Lumber Company has begun the erection of a large dry-kiln. It will cost $18,000, and have a capacity of drying 50,000 feet of lumber a day.

AN immense amount of cedar shingles will be cut this winter in Aroostook, Me., if present prices hold. Cedar swamps are good property in that countynow.

A citizen of Kaukauna, Wis., in digging a well, found embedded in the hard clay, 24 inches deep, several pine cones, in as perfect shape as if direct from the tree.

THE electric light system at Utsalady, W. T., which is employed at the mills for vessels loading, makes day of the darkest night, and can be seen from the heights nine miles distant.

AN unusually large number of big sticks were latterly brought over the Olympia & Tenino railroad, W. T., which ran from 100 to 104 feet in length, and measured from 3,000 to 5,000 feet. The road takes regularly about 800,000 feet monthly to tide water from a single camp.

FLETCHER BROTHERS, of Minn., have purchased of W. C. Sargent considerable cedar stumpage on the south shore, near Duluth, and will erect a mill, and establish offices and yards at Squaw Bay. There is reported an increase of activity in the cedar business in the Duluth district.

THE *Timber Trades Journal* says:—The falling away of the Baltic log trade is said to have been very marked this year. A great deal of pond space, formerly employed for the storing away of Baltic logs, is reported to be now vacant. The tendency of the trade of to-day is certainly in the direction of sawn in preference to hewn wood.

THE carpenters of the Northern Pacific railroad are building woodsheds in Idaho in order to have sufficient dry wood for the locomotives. The shed at Sand Point is 200 feet long by 75 feet wide and those at Camp Hope, Cabinet, Gravel Pitt 3, Rock Island, Trout and Beaver creeks are 20 to 120 feet. The wood to fill these sheds is already cut.

THE Northwestern Lumber Company at Hayward, in this county, is putting in the machinery at its new mill, which will comprise two gangs, two circulars, two trimmers, detachable haulup chain, log rollers, and other approved appointments. It is calculated that the mill will saw 200,000 feet daily, and the company proposes to bank 40,000,000 feet of logs this winter.—*Ashland Press.*

THE *Northwestern Lumberman* says:—The manufacturer who will grumble at the profits of this year's business would certainly complain if he were going to he hung with a silken rope. There has little stood in the way of money-making by the saw mill man. If he has not made his business pay, it was because he either conducted it very loosely, or thought that about all the standing pine was gone, and paid more for his stock than he ought to.

THE *Northwestern Lumberman* says:—Figures representing the cut of 1882, so far as collected, show that the aggregate for the season will be much larger than ever before. There has been no serious hindrence in any district, except at Muskegon, Mich., where the strike put operations back to quite an extent. In the Saginaw and northwestern districts the work of turning out lumber went on smoothly, there heing no disturbance among the employes, and no damage from high water.

IT is stated that it is not at all improbable that the Michigan Central Railroad Company will huild a railroad from the Mackinaw division to Thunder hay. An engineer of the company has been making preliminary surveys from Beaver lake and Piper, extending into Oscoda county, and is now making a survey from Alpena to connect with the Mackinaw division at Beaver lake, *via* Piper. These lines would open up a wide section of timber country to railroad communication.

LATER estimates place the amount of lumber burned in the fire that destroyed the Saginaw barrel works at 1,700,000 feet, a considerable portion of which was hardwood.

ADVICES from Maine lumhermen go to show that operations this season in that state fully equal those of last winter. Though, owing to the hurning of the mills at Fairfield, 10,000,000 feet of logs are left over, there will be no shrinkage in the coming log crop below that of last season. Lawrence, Philips & Co., at the Somerset mills, have about a year's stock on hand for their mills there, and will cut 7,000,000 feet of logs. The total log crop of the operators at Fairchild will not fall much short of 40,000,000 feet.

THE lumber interests of Nashville, Tenn., during the last decade have increased about five hundred per cent. In 1870 there were but three saw mills and six planing mills. Now there are within the consolidated limits of the city, 13 saw mills, 12 planing mills and 33 firms engaged in the lumher trade. Previous to the civil war the amount of lumber handled in this city did not exceed 5,000,000 feet annually. Last year the city mills cut 50,000,000 feet of walnut, ash, poplar and pine, much of the finer grades of which was shipped to the north and west and exported to European markets; while there was received by river and rail not less than 35,000,000 feet additional.

Consumption Cured.

An old physician, retired from active practice having had placed in his hands by an East Indiana Missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung affections, also a positive and radical cure for General Debility and all nervous complaints, after having thoroughly tested its wonderful curative powers in thousands of cases, feels it is his duty to make it known to his fellows. The recipe, with full particulars, directions for preparation and use, and all necessary advice and instructions for successful treatment at your own home, will he received by you by return mail, free of charge, by addressing with stamp or stamped self addressed envelope to

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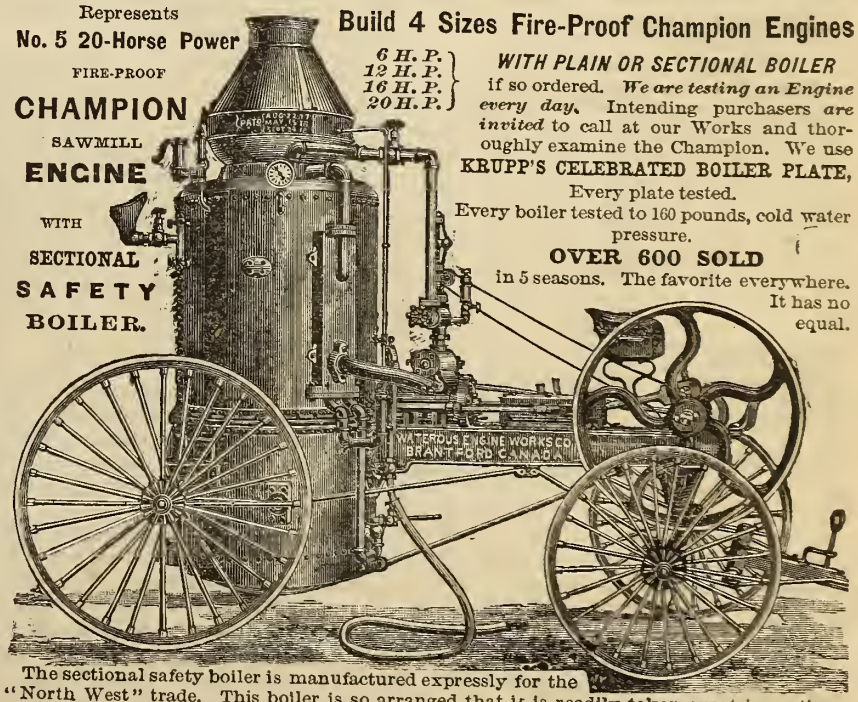

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ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.
Send for New Circular.

Market Reports.

TORONTO.

From Our Own Correspondent.

DEC. 22.—The steady spell of wintry weather combined with the near approach of the holiday season has had the effect of bringing building to a stop, and a state of quietude reigns at all the retail yards, and but few cars of lumber are coming in on any of the railroads, and as there is but little to record in connection with the trade at the present time it may not be unwise to give you a few figures anent the season's sales and shipments at this place, which may, I think, be relied upon as being as nearly accurate as it is possible to get at it. Having taken the trouble to call at the different yards throughout the city and having been kindly assisted by each of the dealers in arriving at correct estimates, I am thus enabled to give correct figures, as to the past years business, and I venture to say that the showing is quite a respectable one more especially as regards the city's consumption.

We have exported during the year as follows :

AMERICAN MARKETS.

Lumber	52,000,000 feet
Shingles	14,000,000 "
Lath	2,000,000 pieces

TO CANADIAN PORTS.

Lumber	6,000,000 feet
Shingles	1,000,000 "
Lath	500,000 pieces

SOLD BY RETAILERS DURINO THE YEAR.

Lumber	45,000,000 feet
Shingles	11,500,000 "
Lath	16,500,000 pieces

SOLD DIRECT TO CONSUMERS BY WHOLESALE MEN.

Lumber	27,000,000 feet
Shingles	4,000,000 "
Lath	7,000,000 pieces

And to the above may be added as shipped by car load by middlemen to points east and west, principally the latter :—

Lumber	3,000,000 feet
Shingles	1,000,000 "
Lath	500,000 pieces

Thus making a total handled here this season of :—

Lumber	133,000,000 feet
Shingles	31,500,000 "
Lath	20,000,000 pieces

This would represent a money value of something like 2¼ millions of dollars and then it must be borne in mind that fully one third more lumber than above represented has been handled by Toronto wholesale dealers and shipped direct from the mills to the west and also to Winnipeg ; and another favorable feature of the past season's trade by retailers, is, there have been less bad debts.

QUOTATIONS, FROM YARDS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	20 50
" " " 32 ft	22 00
" " " 34 ft	24 00
" " " 36 ft	25 50
" " " 38 ft	27 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	16 00
1 " " dressed	23 00
1 " " undressed	17 00
⅜ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent.

DEC. 25.—Trade in lumber is pretty slow just now and entirely confined to the supply of retail wants, which have been small but considered fair for the season. Dealers are busy stock taking to see what the result of last years operations proves to be. Laths are still in demand at the high price, and other quotations are firm and unchanged. There is nothing as yet worth reporting from the woods ; there has been plenty of snow which should enable the lumbermen to get out a large quantity of logs. The manufacturers of hardwood in the townships are hard at work and no doubt the supply will be ample next season. We quote prices in the yards as under :—

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

LIVERPOOL MARKETS.

The latest mail advices report the consumptive demand for western goods as being fairly satisfactory with a further decline in spruce deals. Several cargoes of St. John, N. B., spruce deals were placed at £8 to £7 15s, by private sale, and by auction an average of £7 16s. 7d. was obtained. Wholesale quotations are for Quebec square white pine 1s. 7d. to 2s. 5d. per cubic foot ; Quebec waney board pine 2s. 3d. to 2s. 8d. per cubic foot ; 1st quality Quebec pine £21 to £22 per standard ; 2nd quality Quebec pine £15 to £16 per standard ; 3rd quality Quebec pine £9 10s. to £10 per standard ; St. John, N. B., spruce £7 15s. per standard.

CORDWOOD.

Prices are unchanged and there has been a pretty fair demand for maple which is reported as going out well during the past week. Imports are still meagre and until the country roads are a little better for heavy loads not much is looked for. We quote ex cartage at the depot :—

Long Maple	$7 50
Short "	7 00
Long Birch	7 00
Short "	6 50
Long Beech	6 50
Short "	6 00
Long Tamarack	6 50
Short "	5 00

OSWEGO, N. Y.

From Our Own Correspondent.

We send you corrected quotations to date. Trade has been very dull for past four weeks ; stocks are about as large as usual ; the assortment is good ; dealers are expecting a brisk trade after the New Year's festivities are over. Laths are scarce, the stock of shingles is very much in excess and prices are very weak at our quotations. The receipts at this port for the two past seasons have been for 1882 213,000,000 feet, for 1881 169,000,000 feet.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@20 00
Shippers	10 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	1 90@ 2 25

CHICAGO.

The *Northwestern Lumberman* of Dec. 21, says :—A December quietude brooks over the lumber trade of the entire country. The year is drawing to a close, and lumber dealers are getting ready to underscore a twelve-months' operations.

Last year the December spot supply of about 600,000,000 was not considered excessive by the wisest dealers here, and their opinion was borne out by the after results. The February and March sales reduced the yard stocks so low in assortment that the spring opened with hardly enough to supply the rather sluggish trade that followed in April and May. Circumstances may possibly produce a like condition next spring, though that is hardly to be expected, since the markets everywhere are better supplied than they were last year at the season's close. Hence, while it must be admitted that the surplus this year is greater than it was last, and the prospects of trade are yet in doubt, the excess of supply need not necessarily mean a heavy decline of prices in the spring. The condition of weather and roads, and the prices of farm products, will, more than the amount of stock on hand, determine the demand for lumber during the nine coming months, as well as the prices that will prevail.

Receipts, and stock on hand, of lumber, shingles, etc., for the week ending Dec., 21, as reported by the Lumberman's Exchange :

RECEIPTS.

	Lumber.	Shingles.
1882	3,448,000	1,267,000
1881	5,956,000	2,955,000

FROM JANUARY 1 TO DECEMBER 21 INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1882	2,035,924,000	893,699,000
1881	1,865,105,000	834,996,000
Inc	170,819,000	58,703,000

STOCK ON HAND DEC. 1.

	1882.	1881.	1880.
Lumber	719,458,412	020,781,223	569,879,283
Shingles	309,932,050	265,262,174	200,039,000
Lath	70,994,869	53,017,573	59,186,000
Pickets	3,970,920	2,346,682	2,706,303
Cedar posts	100,258	241,138	47,720

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$57 00@64 00
Pine, fourths	57 00@59 00
Pine, selects	52 00@54 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25
Lath, pine, "	0 00@ 2 50

BOSTON.

Cotton Wool and Iron of Dec. 23, says :—General trade is seasonable quiet. The protracted cold weather has in the main put an end to nearly all outside and new operations for the season. The toue of the market is quiet and steady, with a moderate amount of new business offering iu a conservative way. Advices from the country are quite favorable to logging operations so far, although it is yet too early to safely predict the final outcome of the season's work.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

BRISTOL.

THE *Timber Trades Journal* of Dec. 9, says :—Messrs. King Brothers' December circular says :—There has been but a poor demand for timber of all descriptions during the past month, and the only noticeable feature is a falling off in the importation, reducing the excess of this year's tonnage over last very materially. Quebec goods.—The importation of all classes of these goods has been extremely limited, owing to the great difficulty in obtaining ship-room. Yellow pine timber—There have been inquiries for both common and wany board timber. Birch, ash and elm, with the exception of the former, have been selling freely. There has been no arrival of walnut. Deals do not attract much attention, except those of extra dimensions. Staves are in fair request. New Brunswick goods.—Spruce deals—There does not appear to be any demand at present for these goods. Prices are unchanged. Stocks are not excessive. Pine deals—No arrivals. Birch is quiet. Memel, Dantzic, &c., goods.—Fir timber—There has been an inquiry for this article, but stocks appear exhausted. Wainscot logs have sold somewhat freely at fair prices. Oak logs—We do not hear of any transactions. Staves are in but limited request.

The arrivals for the past month consists of 3 vessels from Quebec, 2,722 tons ; 2 from Nova Scotia, 825 tons, and 2 from Finland, 604 tons ; together, 7 vessels, 4,151 tons register ; against 18 vessels, 10,090 tons register, for the corresponding month last year, showing a decrease of 5,939 tons register. For the season commencing February 1st, 1882, to the present time, there have arrived 149 vessels, 73,561 tons register, against 115 vessels, 64,700 tons register, for the same period last year, showing au increase of 8,852 tons register.

GLASGOW.

The *Timber Trades Journal* of Dec. 9, says : There has been only a trifling addition of American woods to the stocks in Clyde ports during last week, and the little after this date which may drop in will not affect the general market. On the whole there is a fair supply on hand of the various descriptions. Of birch timber there have been no fall cargoes of lower port wood, and the market is open for such. At present there is a good demand for American walnut, teak, and mahogany, and very fair prices are obtained.

Prices fluctuate in Glasgow as well as elsewhere, but that they are so good at this time of year and under circumstances less favorable to trade than they have been must be very reassuring to those who are apprehensive that the stocks of foreign timber are too heavy in this country to justify the expectation that prices can be kept at their present currency. If European prices give way, it is thought those of British America must come down also, but when we see Quebec 1st quality pine fetching £10 to £12 per standard more than the choicest Archangel deals, it is evident that for certain purposes of panelling, and other joinery, there is no competition between American and European pine. The former will be had if the buyer has to pay 50 per cent. more for it.

LIVERPOOL.

The *Timber Trades Journal* Dec. 9, says:—The diminution of busiuess which usually makes itself felt as the end of the year approaches has begun to manifest itself, and although there has been a fair amount of timber, deals, &c., taken from the market recently, yet the decrease as compared with that of last month is large in the aggregate, but compared with that of last year there is no great difference, as it amounts only to about 37,000 cubic feet. A comparisou of the figures in the following stock list will shew the position held by the various items at this period last year and the present time.

Spruce deals have come forward faster then was required, aud as cargoes continue to be stored on accouut of the shippers, the stock has accumulated, but has not yet reached the quautity held last year at this time. At the same time, as cargoes have in some cases been forced from the quay, prices have given way. The import of flooring has also been slightly beyond the demand, and the stock on hand is now sufficient for the winter months.

LONDON.

The *Timber Trades Journal* of Dec. 9, says : There is but little doing in the timber trade just now, that is, in the buying and selling departments outside of the saleroom. If you talk to a f. o. b. seller about next season's prices, he is ready to discuss probabilities with you,

but, unless you are prepared to make him an offer, he is rather shy of quoting a price. He can give you abundance of reasons why the markets ought to be firm, and thinks importers are very wrong to let their goods go so cheap when, if only they would stand out for a good profit, they would be sure to get it. Turn to a buyer, and you find yourself very little the wiser afterwards. He is in no hurry, and is going to wait and see which way the cat jumps before he enters into new engagements. He tells you it is difficult to do any good by importing at the prices demanded on the other side, and he thinks they must come down rather considerably to induce extensive business; and looking at the stocks in Northern Europe, and the plentiful supply on this side, it seems to him that they want more customers in this country than they are likely to find for some time to come. If you suggest that the continent of Southern Europe will come to the rescue, as great works are being undertaken in France and the Low Countries, and that even Spain is greatly increasing her transactions with Sweden, he tells you that he has heard that argument many times before, but that there was always plenty left for this country, which generally came forward quite as fast as it was wanted, and frequently much faster.

THE BLOW-OFF.

One of the most important parts of a steam boiler is the blow-off. It is also one that is subject to more abuse in its construction, location, and use than almost any other fixture pertaining to the boiler. The most peculiar ideas seem to prevail in regard to its construction and position on the boiler. Some put it at the front end, some at the back end, and some put it in the middle of the shell. The great majority also, instead of putting it on the bottom of the shell, where it belongs, insert it through the heads of the boiler, anywhere from two to six inches above the bottom of the shell, thus rendering it impossible to entirely empty the boiler when desired, and greatly impairing its efficiency for any purpose.

The only place for a blow-off pipe to enter a horizontal externally-fired boiler is through the bottom of the shell within a foot or so of the back head. The boiler should be set slightly lower at the back end than at the front, say three-fourths of an inch for a boiler fifteen feet long. Then it may be entirely emptied by simply opening the blow-off valve, and all syphoning of water out through hand holes is obviated.

This, however, is not the most important reason for locating the blow-off at the back end of the boiler. In a horizontal externally-fired boiler the application of the heat, and the resulting circulation of the water, is such that the sediment is always deposited at the back end to a much greater extent than in any other part of the boiler. Obviously, then, this is the place for the blow-off. It is true that most boiler makers now place it there, but there are many who still persist in placing it at the front end.

The proper method of constructing and attaching the blow-off pipe to the ordinary horizontal boiler is as follows: First, the pipe should be two inches in diameter. A circular piece of boiler plate about eight inches in diameter should be riveted on the bottom of the shell, with its center not over twelve inches from the back head. The hole for the pipe had better not be made until after this piece is riveted on, and then it should be drilled. If, however, facilities are not available for doing the job in this way, it may be drilled before it is put on. The hole should then be tapped, when it is ready for the pipe. The rivet holes on the inside of the shell should always be countersunk, and the heads of the rivets driven flush with the inner surface of the plate. If this is done there are no projecting rivet heads to assist in the collection of sediment at this point. A blow-off attached in this manner and provided with a straight away valve outside the setting will always give perfect satisfaction if properly cared for. In many cases, however, where the water is bad, they are not opened often enough, and the inevitable consequence is that they soon become filled up with scale and sediment. When this occurs it may always be regarded as the best possible proof that it is located in just the right place, and, if properly attended to, will prove most effective in keeping the boiler free from scale and sediment.—*The Locomotive.*

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LONDON STOCKS.

THE *Timber Trades Journal* of Dec. 9, says: The dock deliveries continue to improve, but they are only "forging slowly ahead" of those of the same date last year. There is a clear gain of about 120 standards this week, at which rate of recovery it would take more than two years to bring them parallel with the deliveries of 1881 from the same docks. These indices of trade seem inconsistent not only with the access of importation as signified by the Board of Trade returns, but also with the reputed activity of the building trade in and about London. But facts put into figures are hard things to get ever.

If there were a short supply in the docks the puzzle would disappear, hut it happens that of the most marketable goods there is an unusually good supply. In Baltic deals and battens there are still about 1,300,000 pieces more than last year at the end of November, of British American there are fewer, both in pine and spruce, but the difference is not above 150,000, or about one-eight part of the excess from European ports. In flooring and boards generally there are now only about 500,000 pieces more than last year, a mere bagatelle, when we recall that earlier in the year the difference was counted in millions. There was, however, at this period in 1881 a much larger quantity landed, but not taken into stock, than there is now, and the next dock returns will probably show a nearer approach to equality in the two seasons.

PUGET SOUND LUMBERING.

TACOMA, W. T., Dec. 15.—The winters operations on the Sound will be much heavier than on any previous season, it being universally conceded that next year's demand will be greater than on any previous year of the lumber industry on the Sound, aud prices will likely rule as high as in 1882. The local demand, already very large, will no doubt increase 25 per cent. There is now great activity among the loggers New roads are being cut, new camps established, land secured, etc. A general movement toward back lands is observed, the margined lands having been cleared of their best timber. As a result considerable railroad building will follow during the coming year. The fact of this enforced retreat into the heart of the great forests, the necessary construction of logging roads, the purchase of heavy tracts of timber. and generally increased expense, makes it apparent that larger capital will henceforth be needed in the same ratio that operations are extended. There are already several large concerns operating on the Sound, but the time is not far distant when the interests of this region will equal those of the great North, and receive the attention of such representative men and concerns as Tom Nester, the American Lumber Company, the Diamond Match Company, and the like Where, 10 years ago, 15 men constituted a big camp force, 30 to '60 are now frequently employed.—*Northwestern Lumberman.*

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

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STOCKS AT LIVERPOOL.

The *Timber Trades Journal* says:—Judging from the quantity of timber, deals, and other wood goods lying at the various wharves and railway depots for shipment to the country, there would appear to be a good consumption going on, and when the statistics for the month are made up it is not at all improbable that the figures will be found to be larger than is at present thought. Although the import of spruce has been much beyond the anticipations of those most interested, comparatively little has gone into stock, although in some cases importers have stored their cargoes rather than yield to any further concessions in prices, as the late sales have been made on terms which must have left shippers with heavy losses to face, as buyers recently have had all the best of the market. Reports from the shipping districts all point to a curtailment of supplies from those ports which are in no danger of being frozen up, but, on the other hand, there will doubtless be an amount of anxiety to press forward goods from the northern ports whilst the opportunity affords, rather than have them wintering over.

Lumberman's Farm.

Wells, Stone & Co., who lumber in Roscommon, Gladwin and Clare counties, Mich., have a fine farm of 1,000 acres in Gladwin county, of which 600 acres were under cultivation during the past season. The crop comprised 500 bushels of wheat, 4,000 bushels of oats, 250 tons of hay, 1,900 bushels of potatoes, 5,500 heads of cabbage, 19 barrels of pickles, 3,000 bushels of turnips, 300 bushels of onions, 200 bushels of beets, and other things usually grown on a farm. All this stuff is used in the firm's camps.—*Northwestern Lumberman.*

Tenons.

A single tenon is, theoretically, stronger than a double one, and its mortise also weakens the timber in which it is framed less than 2 mortises would. Practically a double tenon would be used with a joint bolt for drawing the framing together, placed between the two tenons; or it might be advisable to use two tenons to diminish the effect of shrinkage, as, for instance, in a door, where a double tenon often answers better than a single one.

THE Toronto *Canadian Manufacturer* says:—At a meeting of representatives of insurance companies, held on the 3th Dec., an advance was made on rates for insuring lumber in any part of Ontario and Quebec, the cities of Montreal, Toronto, and London only excepted.

IN common with the general cry, the preparations for logging on the Wisconsin river are the greatest ever known, 140,000,000 feet of logs being already contracted for, to be put into the main river and its tributaries, north of Merrill, while at least 40,000,000 feet more, not under contract or to go on the market, may be calculated on.

THE Emerson *International* says:—Carney & Watson are having loaded at the station ten car-loads of lumber destined for Regina, where it will compose part of a large stock of lumber and building material in a new lumber yard to be opened at that place by Messrs. G. F. Baldwin and L. R. Schaffner of this place. Mr. Baldwin expects to leave for Regina next week.

GLASS FOR BUILDING.

The Chicago *Northwestern Lumberman* says:—

"The *Lumberman* is rather proud that it was the first to name glass as a building material. It saw in the future—and not in the far future either—buildings the sides of which were constructed of glass instead of brick, stone or wood. Some of its contemporaries were inclined to make light of the idea; but the man who leads the way is sometimes reviled. A remarkable instance of the kind occurred a great many years ago. A representative of one of the leading dailies of Chicago has been interviewing the architects of the city, and among the reports is the following:

'A prominent firm of architects, who have the reputation of holding conservative views, are inclined to think that in the near future glass is to enter much more extensively into building material than ever before. The firm states that, owing to improvements in manufacture, glass can be manufactured in blocks, columns, capitals, friezes, etc., of any size and of any design which the most diverse tastes can conceive of, and that it is capable of sustaining a greater weight than any other substance, even granite, which is composed largely of quartz crystals. Annealed glass columns, for instance, could be introduced for entrances, supports, etc., without very much expense over and above unannealed glass, the process requiring only extra care and more time in cooling. It is very possible to build entirely of glass blocks. The material is smooth, clean, and handsomer than any other, and will not intercept the sun's rays, so that it would give a saving in fuel, and, being impervious to atmospheric changes, would be practically everlasting. It would require no laths, plaster, or paint, and would not retain impurities from the atmosphere, which would seem to make it desirable from a sanitary point of view. It could be made in any color, could be transparent, clouded, or opaque, and moulded into any desired shape.'

These opinions coincide exactly with what the *Lumberman* has said on the subject, and it congratulates the architects, although they are a little late, that they are on the right track. The following table will be of interest as showing the average crushing weight per square foot of the different building material now in use, also of glass, one of the coming materials. It will be seen that glass will bear three times the weight of granite:

	TONS.
Glass	1,800
Granite	600
Basalt	700
Building sandstone	300
Red sandstone (New York and New Jersey)	250
Brick	175
Ordinary brickwork	25
Good brickwork laid in cement	35
Brickwork, first-rate	60
Slate	600
Concrete (1 part lime and three parts gravel)	30 to 50

THE STINGING TREES OF AUSTRALIA.

The stinging plants of Queensland, Australia, belong to the natural order Urticaceæ, and represent two genera, *Urtica* and *Laportea*. Of the first named genus there are two species in Queensland, both herbaceous plants:

1. *Urtica incisa*, found chiefly on the Fitzroy River, and said by M. Thozet, of Rockhampton, to grow in great profusion.

2. *Urtica urens*, a common weed in this country—the nettle—and found in the neighborhood of dwellings in Queensland.

In the genus *Laportea*, on the other hand, there are three great stinging trees:

1. *Laportea gigas*, a large tree, often attaining a height of 100 feet or more. The wood is soft, fibrous, and juicy, and the bark smooth and ash colored. The base of the tree is supported by prominent angles or buttresses. The leaves are from 1 foot to 1 foot six inches long, and nearly as broad, smooth above and sprinkled with a few stinging hairs, but more or less covered with short, soft hairs underneath. It is found chiefly in South Queensland. The sting is severe, but not so bad as that of *L. moroides*.

2. *Laportea photiniphylla*.—A fine tree, from 60 to 70 feet in height, with a straight stem. The wood is soft, and the leaves are almost elliptical in shape, nearly smooth and sprinkled with a few stinging hairs. It is found in the Moreton Bay district, and also in North Queensland. M. Thozet mentions having found it on the Fitzroy River.

Laportea moroides.—A small tree, with most virulent stinging hairs. The leaves which are about 9 inches long, are covered with short soft hairs on both sides. The fruit is of a beautiful purple color, succulent, and densely clustered. This tree is found chiefly in the Kennedy district in North Queensland. Mr. Fitzalan, of Bowen, mentions that it is common about Port Denison and Edgecumbe Bay.

These stinging trees, which Bentham and Von Mueller place in the genus *Laportea*, are by many botanists included under *Urtica*.

Of all the stinging plants of Queensland, *Laportea moroides* surpasses the others, both in the severity of the pain produced at the time and in the duration of its effect.

Woods for Pulp.

Wood pulp, which is made into paper, and molded into barrels, casks, pails and other woodware, boxes, cornices, picture frames and a variety of small articles, can now be made from many other woods than poplar, which has long held the preference in such manufacture. Buckeye has a white fiber, and can be used, while spruce, pine, chestnut, basswood, fir, hemlock, cedar, cottonwood and other kinds of wood have been found suitable for making into various kinds of paper. Only the non-resinous woods are adaptably for white paper, while the resinous woods serve well for colored paper. Machines have been built which turn out pulp with equal facilities from all kinds of wood, different stones being required for different woods however. The longest fiber is made from willow basswood and poplar ranking next respectively, in that regard. Cedar, fir and hemlock are said to grind about alike, the latter working a little more freely. Maple has a fiber shorter than that of either spruce or pine, and is quite hard to grind. Birch is comparatively hard, and grinds very short. Poplar and buckeye pulp remain white for a considerable time; other woods changing color. Birch becoming pink, maple turns purple and basswood takes on a reddish hue. It is estimated that over 200 tons of wood pulp are daily turned out in the United States.—*Northwestern Lumberman.*

Work in the Woods.

In their operations on the Trent, Moira Salmon and Napanee Rivers and their tributaries, Rathbun & Son employ in the vicinity of 900 men. The season thus far has been very favorable for lumbering operations, as the weather has been very pleasant and the snow fall sufficient to enable hauling to be done quiet readily. Already the firm has 150,000 pieces of pine cut and skidded, in addition to ceder ties, pickets, and telegraph posts. At first it was the intention to make the cut for this winter as extensive as possible, but the chances are, judging from present indications, that the work in the woods will, to a certain extent, be curtailed, as the prominent lumbermen of the district, after consultation, have decided to limit their production for next year. Rathbun & Son have gone into the tie trade very extensively. They have a contract to supply the G.T.R. between Montreal and Sarnia; they are expected to fill all the wants of the Quebec & Ontario Railway, with the exception of the portion between Peterborough and the Trent River; they supply the Midland, and have contracts for furnishing three roads in New York State with these rail supporting requirements. The firm's business this winter, will therefore, be quite extensive.—*Belleville Intelligencer.*

A SURE THING.—In the treatment of Chronic Disease with that great system renovator and restorative, Burdock Blood Bitter, there is no uncertainty as to its action, its curative powers are speedily manifested by its marked effect upon the Liver, the Bowels and the Kidneys. Every dose performing its work in a perceptible manner.

A WISE MAXIM.—"A stitch in times saves nine," not only in making garments, but also in mending health. If Hagyard's Pectoral Balsam were used in the earlier stages of Colds and Coughs, many a "stich in the side," and many a case of torn lungs might be avoided, that, neglectad, rapidly develope into irreparable Consumption,

FIRE IN THE WOODS—DON'T START ONE.

A friend of ours once had a startling experience in a clearing on the southern shore of Lake Superior. Sitting on a large log, twenty feet long, he thoughtlessly held the lighted end of a cigar upon the half rotten surface, and went away without noticing the effect. The next day at the same hour, passing by the spot, he was astonished to find the huge trunk nearly consumed, and all glowing with an intense heat. The fire had silently eaten its way through and through the log, and nothing but its chance isolation prevented a disastrous forest fire, which might have laid waste half a dozen counties and destroyed a thousand homes.

Everyone who goes into the woods—every hunter, chopper, logger, picnic party, rambler, botanist, should bear in mind that a spark may cause a conflagration, as ruinous as that which occured in Michigan last year.

The forests of the United States still yield annually four hundred and fifty million dollars' worth of merchandise, and furnish employment to one million persons. This is the least of their usefulness to us. They prevent the too rapid evaporation of the rain; they retard the melting of the snow, thus preventing destructive floods, garnering up the water for safe and gradual use, and keeping the mountain springs ever full and fresh. Let us unite in guarding this precious inheritance.—*N. Y. Ledger.*

The Digestibility of Oysters.

Why oysters should be eaten raw is explained by Dr. William Roberts in his lecture "Digestion." He says that the general practice of eating the oysters raw is evidence that the popular judgment upon matters of diet is usually trustworthy. The fawn colored mass, which is the delicious portion of the fish, is it liver, and is simply a mass of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropate digestive ferment—the heptive diastase. The mere crushing of the oyster between the teeth brings these two bodies together, and the glycogen is at once digested without any other help than the diastase. The raw, or merely warmed, oyster is self-digestive. But the advantage of this provision is wholly lost by cooking; for the heat immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

"My dear sir, do you want to ruin your digestion?" asked Professor Houghton of Trinity College one day of a friend who had ordered brandy and water with his oysters in a Dublin restaurant.

Then he sent for a glass of brandy and a glass of Guinness's XX, and put an oyster in each. In a very short time there lay in the bottom of the glass of brandy a tough, leathery substance resembling the finger of a kid glove, while in the porter there was hardley a trace of the oyster to be found.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. Norisk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

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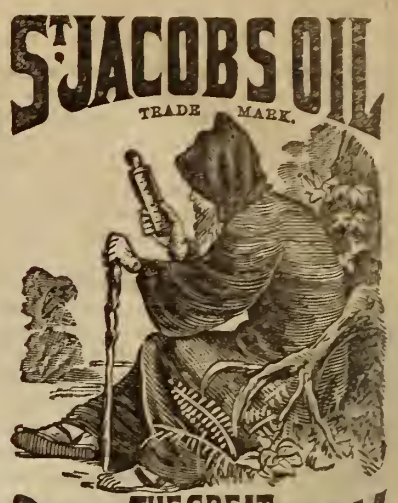
ROCHESTER, N. Y.



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We don't want your money until you are perfectly satisfied of their curative powers. If your life is worth saving, don't delay in giving these **Powders** a trial, as they will surely cure you.

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The Way They Do It.

A correspondent of the Grank Fork *Plaindealer* attempts to elucidate the method pursued by the alleged pine rings of Minnesota to squeeze out rival bidders at an auction sale of standing pine:

"The only way to bid safely at a pine land sale is to procure estimates, which will cost $10 and upwards per 40 acres. When the day of sale arrives—which may or may not be put off from time to time if too many bidders are on hand (this has been done in the past before)—the bidding commences. This ring, that is in possession of estimates covering all the land to be offered, appoints one or more men to bid for it. This ring may, and probably will, embrace capital to the extent of $5,000,000. If no opposition is made the land is bid off at from $1.25 to $2 per acre; but if opposed by a bidder the lands are run up and unloaded on the outsider at a high price, or they are bid out of his reach. Thus one of his estimates is disposed of; and so on until his list is exhausted. As soon as bidders are out of the way the price drops to $1.25 or $2, the latter being the highest price the government has ever secured at former sales. After the sale is closed the excess paid to drive off outsiders is divided *pro rata* over all the lands purchased by the ring. Under this system the individual is contending against amassed capital, with the usual result."

The Men for the Woods.

The *Northwestern Lumberman* says:—Every man does not stop to think how the lumber industry would be crippled if immigration to our country were to stop. If loggers and saw mill operators were to hang out the sign, "No foreigners need apply," all instead of few of the families who settle in the new West would be obliged to live in dug-outs. American boys can keep books, go to college, and live off the old man, but not many of them are inclined to pile lumber or endure the rigor of camp life. It would be a sight worth witnessing to see them lay off their silk suspenders and swing the axe or pull the cross-cut. They look upon the foreigners in flannel shirts and big boots who seek the jobbers as very ordinary cattle; but these same foreign gentlemen are prepared without special training to go into the woods and make themselves useful to the world. Their muscle is equal to the task of swinging a four-pound axe from daylight to dark, and it is fortunate that a swear in a foreign tongue makes the mule as lively as though it were hurled at him in the purest English.

A California Tree.

There was recently felled in Sonoma County, California, a tree which cut up as follows. The Petaluma *Argus* says that the details can be relied upon. The standing height of the tree was 347 feet, and its diameter near the ground 14 feet. In falling, the top was broken off 200 feet distant from the stump, and up to the point of breaking the tree was perfectly sound. From the tree saw-logs were cut of the following lengths and diameters: 1st, 14 feet long, 9 feet diameter; 2d, 12 feet long, 8 feet diameter; 3d, 12 feet long, 7 feet 7 inches diameter; 4th, 14 feet long, 7 feet 7 inches diameter; 5th, 16 feet long, 7 feet diameter; 6th, 16 feet long, 7 feet 10 inches diameter; 7th, 16 feet long, 6 feet 6 inches diameter; 8th, 16 feet long, 6 feet 4 inches diameter; 9th, 16 feet long, 6 feet 3 inches diameter; 10th, 18 feet long, 6 feet diameter; 11th, 12 feet long, 5 feet 10 inches diameter; 22th, 18 feet long, 5 feet 6 inches diameter. It will thus be seen that 180 feet of this remarkable tree was converted into saw-logs.

JAMES VICK.—From the appearance of *Vick's Floral Guide*, which is on our desk, we should judge that the young *Vicks* are "chips of the old block," as the *Floral Guide* with its lithographed cover is handsome enough for the parlor table. It is printed on the best of paper, has three colored plates of Flowers and Vegetables, and full of useful information. Those who send 10 cents for it cannot be disappointed, as the plates alone are worth the amount. Address, as in past years, JAMES VICK, Rochester, N. Y.

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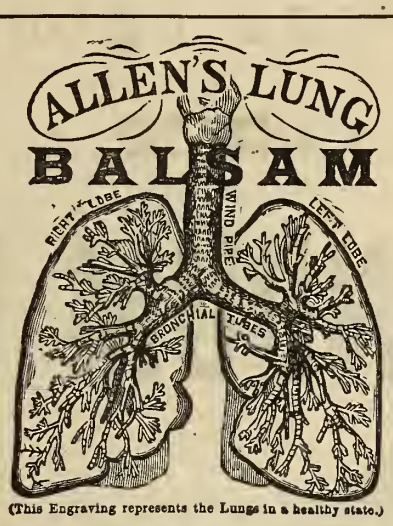

(This Engraving represents the Lungs in a healthy state.)

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In Consumptive Cases

It approaches so near a specific that "Ninety-five" per cent. are permanently cured where the directions are strictly complied with.
There is no chemical or other ingredients to harm the young or old.

As an Expectorant it has no equal. It contains no Opium in any form.

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This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

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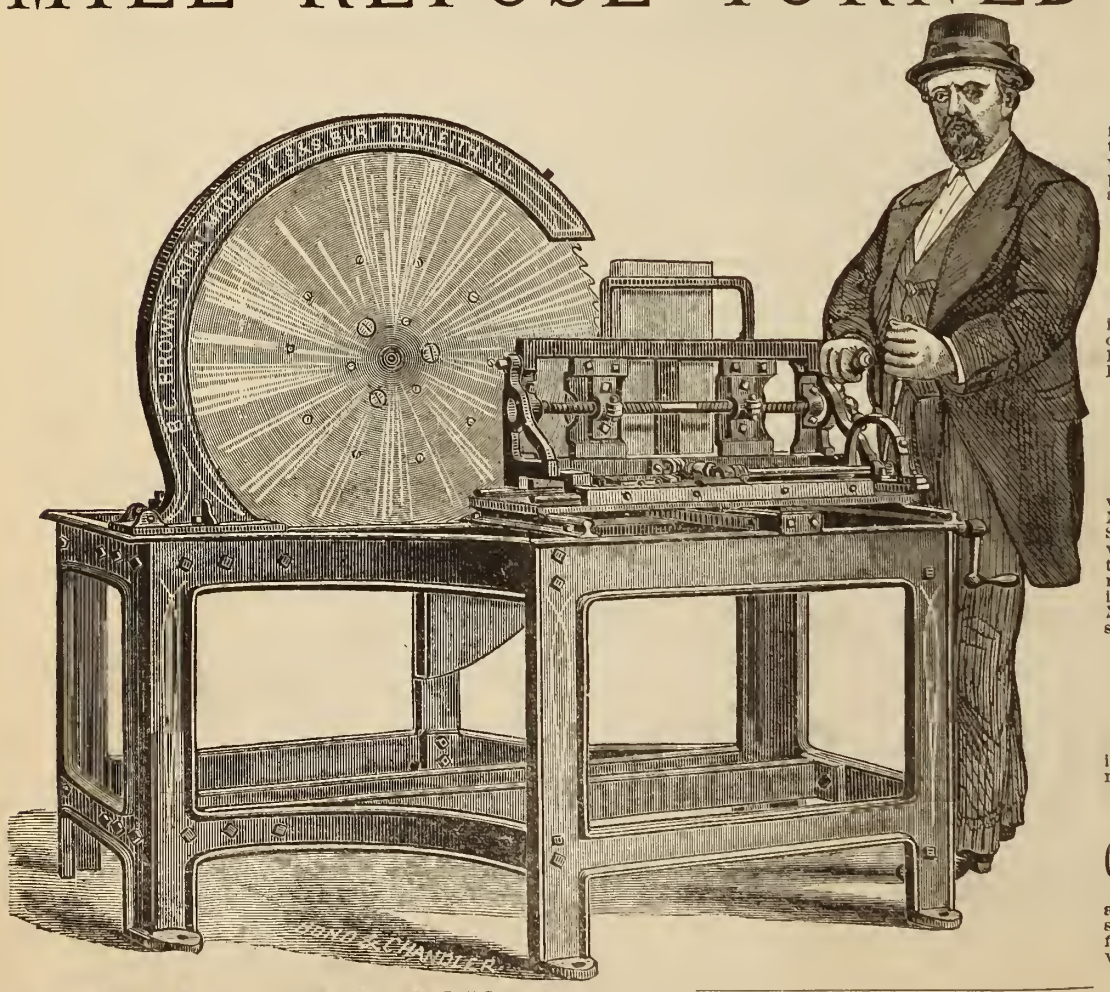

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Brown's Patent Spalt and Shingle Mill,

for making Shingles, Barrel Heading, Box Stuff, &c., from spalts, board trimmings, slabs, and mill waste generally, turning material otherwise worthless into valuable products. I have made arrangements with the patentee to manufacture and sell for the Dominion; have made and sold a good number of these machines which are giving excellent satisfaction and can give the best of references.

Our Steam Feed for Circular Mills,

is now the Best Feed where Steam is the motive power. It is easily operated, is simple, rapid, and seems never likely to wear out; sixteen 16 ft. boards, or eighteen 13 ft. boards, have been cut by it in one minute. It is the established feed for steam mills; I make a specialty of its manufacture; will guarantee satisfaction.

Our Patent Twin or Span Circular,

with Steam Feed for Steam Mills, and Rope or Rack Feed for Water Mills is fast coming into general estimation and is used in place of Gang Slabber in our best Canadian Mills. One of our Span Circulars which will slab logs 25 inches in diameter down to 7 and 8 inch stocks, will do the work of three slabbers, with an immense reduction in first cost, running expenses and labour. Two of these machines can be seen at work in Messrs. Gilmour & Co's Mill, Trenton, and Georgian Bay Lumber Co's Mill, Waubaushene and Port Severn. ☞I am also introducing a new style of Mill Engine, neat, substantial and simple, with Corliss Frame and Balanced Valve, all carefully designed and honestly made.

Covel's Automatic Saw Sharpener,

is now well-known and highly appreciated, when placed at work in the mill it sings out its own praise; I keep it constantly on hand, ready for immediate shipment.

Our Standard Circular & Gang Mills & Machinery,

are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a specialty, any party wanting a First-class Mill will find it to their advantage to give me a call.

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AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

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VOL. 3. PETERBOROUGH, ONT., JANUARY 15, 1883. NO. 2.

PROSPECTS IN SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says :—Work has now commenced in the woods in some places, while the process of forming gangs in others is in progress. Heavy masses of snow have fallen before the ground and morassses were properly frozen, artificial means will have to be used in many cases before "driving" can be resorted to. There is at present every disposition to restrict the "get" of logs to a moderate quantity ; and this will probably be the advice given to members at the forthcoming meeting of the society of saw mill owners and timber exporters, to be held here on December 16th. It is hard to say whether this advice will be followed or not ; but, if not, there is every probability of further price falls, as it is quite evident that production is getting ahead of consumption.

The returns of exports from Sweden for the ten months ending 31st of October of this and last year's totals are as follows for our trade :—

	1882.	*1881.*
	Stds.	*Stds.*
Sawn and planed wood.....	675,730	542,170
	Cub. ft.	*Cub. ft.*
Square and partially square wood	15,393,212	12,643,486

showing an increase equal to about 25 per cent. in the sawn and planed wood, and of over 20 per cent. in the hewn wood. The significance of the above figures, in conjunction with a reduction in the deliveries from London docks of over 13,000 standards during a similar period, ought to do more than anything else towards keeping the log "get" down during the present winter.

A RUSSIAN ENTERPRISE.

A correspondent sends us the following interesting account of a large saw mill estate in Russia, to the management of which he has recently been appointed :—

Gorval is a large old estate, which formerly belonged to a Polish family, but was sold last year to a Russian General. The place is very large, between 40 to 50,000 deschettims, or, to give you a better idea of its extent, I may tell you that if I wished to take a ride round its limits, I would have to prepare for a ride of about 120 English miles. It is situated about 1,000 versts, or about 650 English miles, south of St. Petersburg, where the two rivers, Berezina and Dneiper, meet.

The woods on this estate are very extensive and valuable, consisting mostly of red fir, but also oak, elm, ash, &c. The fir which is growing here is of a first-rate quality, growing most beautifully, 80 to 100 feet high, straight as candles, and of a size rare in the more northern parts of Europe. The climate is mild ; a rather short, but frequently very cold winter, and the summer very warm. Grapes ripen on the estate. The ground is free from undulations, and hardly a stone to be found on it, which will enable us easily to get out of the woods our 150,000 blocks which we are going to cut this winter, the evenness of the ground allowing us to cart the blocks on wheels as well as on sledges.

We are building this winter a saw-mill with six frames, and next spring a planing and moulding mill, and also joinery works. A speciality will be oak parquetry, which is very much used here in Russia, and has a market almost to any extent.

All the newest machinery in use for wood-cutting and woodworking are already partly ordered, and will be taken advantage of for this enterprise. The saw-mill, as well as the factory, will be lighted up with the electric light. The motive power, both for the mill and for the joinery works, are going to be three English steam engines of 40, 40, and 50 horse-powers respectively, and five boilers of together 150 horse-power. Next summer a tramway of 10 to 15 English miles is going to be built into the woods, in order to make it easier to get the blocks out. More than 2,500,000 blocks are calculated to be growing on the estate.

What makes this business of special interest is that, as far as I know, there are neither saw-mills nor joinery works worth mentioning in this part of Russia. The next year's production is calculated to be 7,500 standards, a part of which will be sold in Russia ; the most of it will have to be exported, *via* Libau.

Most things are very different here to what they are further north, and so is also the way of getting the timber out of the woods. In the North it is generally left in the hands of the foreman to find horses for carting the wood down to the rivers, and much depends upon them whether the blocks come out and what price.

In this part of Russia, which formerly was Polish, the peasants were up to the year of 1862, as it was called here, Kriepostnoje, or a sort of slave. Living in small communities or villages, they had nothing they could call their own, Everything belonged to the community, and the community itself belonged to the owner of the estate on the ground of which the community was situated. Since 1862 a new era for these poor peasants began. Each became possessed of a very small piece of land, which he could cultivate, and call it his own, and at the same time he became the proprietor of the poor hovel in which he was living. This certainly made a great difference to each individual. The community, however, remained very much the same as it had been for hundreds of years. In these little villages they live still that patriarchal sort of life they had always been used to. The eldest man is the head of the family and the elected eldest is the head of the community. Before his tribunal every case is brought, be it of dispute or be it of general importance to the community. and settled in an assembly where every one has a right to a seat, without any trouble of being elected.

If I have any work to be done which requires the help of many men, I do not want to make up an agreement with each party separately. I make up a contract with the whole community, in which each individnal pledges himself to do a certain amount of work ; and when such contracts have been signed by the whole community, I can, without risk, advance any amount wanting to the parties in question.

This is what we have been doing here. A mass of contracts have been made out with all these little villages in the neighborhood, the one village pledging itself to give a certain amount of hands to dig, another so many hands to do carpenter's work, another for masonry work, another for transport of bricks, another for the building of flood vessels, and a great many for felling of the trees in the woods and for transport of the logs to the river.

The winter came early this year ; we have had frost and snow for some time and the works in the woods have already begun. We wait only for more snow to come to see such work going on, as certainly this place never dreamt of before.—*Timber Trades Journal.*

RAILWAY SLEEPERS IN FRANCE.

A recent number of the *Revue des Eaux et Forets* contains the following abstract of a long-delayed report on the above subject by M. Jacquin, Ingenieur en Chef des Ponts et Chaussees :—

In 1877 the six great French railway companies required 2,563,000 sleepers annually for the maintenance of their permanent way. Compared with the mileage, this amounted to 93 sleepers per kilometre (0·6 English mile) per annum, or to over 7,000 sleepers daily.

Assuming a single tree to supply on an average 10 sleepers (which is below the average of beeches, but above that of oaks), the maintenance of the French railway system necessitates the destruction of 700 large trees for every day in the year. When the projected extensions have been carried out the expenditure will amount to 1,000 large trees daily. To this enormous figure must be added the quantity required for repairs of rolling stock, which cannot be put down at less than 140,000 cubic metres (about 5,000,000 cubic feet) in the year. Besides this, the construction of 20,000 kilometres of new lines, as proposed, within the next ten or fifteen years, will cause a further demand for 20,000,000 new sleepers.

With a view to the reduction of this enormous demand, the French railway companies have long been endeavouring, like others, to increase the durability of their sleepers by impregnating them with antiseptic substances, the two heretofore most used being cupric sulphate and creosote.

On the South (*Midi*) and West (*Ouest*) of France lines sleepers and telegraph poles impregnated with both these substances have long been in use and are still in a perfect state of preservation. A creosoted beechen sleeper was taken up on the West of France line after nineteen years' service. This is a remarkable example; but similar instances may be met with on other lines ; the real mean average life of such impregnated sleepers does not, however, appear to have been as yet satisfactorily determined.

After long experience, the Eastern of France line (*de l'Est*) gives the preference to gas-tar over all other antiseptics, and creosotes even oaken sleepers, the sapwood as well as the less indurated portions of the heart absorbing the tar freely. The sleepers are not put in creosoting chambers, but are cut and dressed so that all the bearing surfaces are thoroughly impregnated. Under a pressure of 6 to 7 atmospheres, oaken sleepers absorb 7 to 8 kilogs, of creosote, beechen sleepers 30 to 35 kilogs. There is reason to hope that the larger quantities thus absorbed increase the power of resisting the elements of destruction in a corresponding degree.

Mr. Blyth has proposed a process of treating log or sawn wood with hydro-carburetted gas in close chambers, that is to say, exposing it to the action of ordinary high-pressure steam, containing liquid hydrocarbons in a state of spheroidal diffusion. The inventor claims for the process that it effects perfect saturation of every part of the wood, whether green or dry, sawn or unsawn, with the protective substance. These promises, somewhat over-sanguine perhaps, have not yet had the full confirmation of experience.

The solution of the railway sleeper problem has been sought in another way. Stone, concrete, and cemented brickwork sleepers have come up again. But it must be remembered that these offer neither the conditions of elasticity nor the facilities for attachment which are indispensable, so that there is no prospect of their general adoption. These metal sleepers have been tried, and, could a good model be found, our great metallurgical firms would, no doubt, find a new element of industry in supplying the imperious demands of the iron horse. But, unfortunately, the experiments made thus far, on different lines, have not given satisfactory results. A metal sleeper, to be successful, must combine all the qualifications of resistance to a transverse strain, a good seat on the ballast, and stability in the mode of attachment of the superincumbent rails, and withal the outlay must remain the same. This is the point generally overlooked by inventors. It is not enough to have a perfect line on the opening day, it must be kept in working order, and to do this, so far as French experience goes, a larger outlay appears to be necessary with metal sleepers than with wooden ones. The results at present are therefore unfavourable to the use of metal sleepers.

CANADIAN HARDWOODS.

Our trade in hardwoods, which a generation ago was confined, as far as Ontario is concerned, almost exclusively to walnut and oak, has undergone of recent years a remarkable development. Uses have been found for woods whose adaptability and beauty were not known or recognized in former times. And a value is now plaeed upon a number of these which not long since were regarded as fit for nothing but fuel. Basswood for example, was considered, at the time when the Reciprocity Treaty with the States was in force, as fit only for cordwood—poor cordwood at that; black ash was almost equally despised; soft elm was neglected; and hickory, that strong, tough timber, so much used for carriage wheels, was regarded as desirable only for snow-jumpers, or for winter fires.

An unforeseen demand having arisen for many kinds of timber within the last few years, both abroad and at home, it may be well to notice the great variety of hardwoods Canada possesses, their *habitat* and uses. The classification adopted by a firm of Toronto dealers, prepared for the Ontario Government and communicated to the *Northwestern Lumberman*, may serve us. It is as follows:

Ash.	Elm.
Basswood.	Hickory.
Beech.	Maple.
Birch.	Oak.
Butternut.	Sycamore.
Cherry.	Walnut.
Chestnut.	Whitewood.

Of course, there are several varieties of a number of these woods. The various sorts of oak, elm and ash, for example, differ widely in their uses and values, as we shall see further on. The kinds of hardwood lumber most in request for home use or for export, we are told, are walnut, cherry, butternut, chestnut, white oak, whitewood, basswood, white ash, black ash, and soft elm. The supply of some of these is so limited, and the demand for them so steady, that they must become scarce and dear in a very few years; and, unless care be taken to replant they must become extinct; in which case the more common kinds, such as birch, maple, black ash, soft elm, will naturally be sought to take their places. A considerable share of the Canadian hardwoods now used for decorative purposes, goes to the United States. We send thither, principally from Ontario, butternut, cherry, white ash, and birdeye maple, to be used in car fittings, or house-interiors; sycamore for tobacco boxes; butternut for cigar boxes. From New Brunswick we send birch timber to Great Britain, and in that country, as well as among our American neighbors, the birch appears to enjoy increasing favor. Oak, too, we continue to ship to Great Britain in the log and in staves.

If we consider each variety in its order, we shall see what woods are most nearly exhausted, and which ones are of the the greatest value to the country.

MAPLE.—The maple, as becomes the tree whose leaf is the natural emblem of Canada, is the most plentiful of all our forest trees. In Ontario it is especially abundant. The Muskoka country, the Midland district, the western peninsula, are all well supplied. It is used for furniture and in various other manufactures, common chairs especially, and the demand is growing all the time.

BIRCH —This is a fine-grained, handsome wood, in growing estimation, and probably increasing value. There are those who think that, as an ornamental wood, it will supplement walnut, cherry and butternut. It is found generally distributed over Ontario and the eastern provinces, and care should be taken to preserve it. There is a market in the United States today for quantities of black birch, which resembles cherry, and, when stained, resembles walnut; it takes as good a polish as cherry and can hardly be distingished from that wood. There is plenty of it on the Mattawa and in the Nipissing territory.

ASH.—White ash, which is found chiefly in the western part of this province, is in active request from railway carworks, wagon-makers' shops, and agricultural implement factories. It commands good prices, if sound timber, and is largely exported to the United States. The supply is not abundant, and inroads are being rapidly made upon it. Black ash is more generally distributed; it is used for house-fittings and for furniture. The demand is increasing, but can be met by the supply.

OAK.—Of this tree we have several varieties; the white, the red, the gray and blue. White oak is most sought after, and commands the highest prices. Most of our cut of this, from all the provinces east of the lakes, goes in the log or in staves to Great Britain. Western Ontario has in past years furnished many a stately tree, and there still remains a good deal of this kind of wood. Red oak, as well as the kinds called grey and blue, are found in the north and west of Ontario. It is used generally and extensively, for agricultural implements and for railway carriages.

ELM.—Least plentiful of the many varieties of this wood is the genuine rock elm, which is in great request, from its strength and toughness, for carriage and wagon-making. It is mostly found in the neighborhood of Lake Erie or Lake Huron. Other kinds, such as the gray, blue and soft elms, are plentiful enough, and are made use of for furniture to a large degree. Soft elm is used extensively for making band hoops for flour barrels and staves, and is exported largely to the United States and Great Britain.

BASSWOOD.—This wood is common in most parts of Ontario and Quebec. Once rejected for all purposes but fuel, it is now in request by carriage and street-car makers, and for furniture and interior fitting of dwellings, &c. It is a fine-grained and delicate-colored wood, and finds a ready market in the States, as well as here. From the absence of resin, basswood is preferable to pine for panelling, &c. It *can* be used for mouldings in interior wood-work. Large trees of it have become scarce, and the small timber is now being used.

HICKORY.—The westernmost counties of Ontario were at one time very freely supplied with the hickory tree, whose nuts are so toothsome, and whose wood gives such intense heat in the old-fashioned wood stove, to say nothing of the uses of its bark to the Indian or the *habitan* for torches, by which to spear fish at night. Hubs, spokes, shafts, single-trees, and other portions of a wagon or carriage are now made from it, and agricultural implement makers understand well its properties of strength and toughness. It is now comparatively scarce, quantities of its product having been shipped to Britain from St. Thomas, Amherstburg, St. Catharines, and other points at which there are bending factories.

WALNUT.—The warm color and rich surface of black walnut when finished, have long made it a favorite wood, at first for furniture, but now for the interior structure of public buildings and private dwellings. In the wood-work of organs, sewing machines, and the like, it is regarded as indispensable, and the result of the demand is that but little walnut is left in Canada. It is now a more costly wood than ever, large trees of it being especially valuable. We have to import it from the Northwestern States; and even there, such is the demand, it is growing scarce.

WHITEWOOD.—The western peninsula of Ontario once boasted a good deal of this rather attractive wood, which has been much demanded for furniture makiug and panelling of cars, &c. It brings good prices, and is no longer plentiful.

BUTTERNUT.—For pulpit and altar decoration, for bed-room furniture and dining-room wainscot, for cigar boxes and sundry other purposes, butternut has come to be regarded as very desirable; indeed the limited supply of it, existing mainly in the north and west of this proviuce, must soon be exhausted.

SYCAMORE.—This wood is growing scarce and dear. It is principally used for tobacco boxes, for which purpose quantities have for years beeu shipped from Essex and other couutics to Americau lake ports, and even as far as Virginia. Kentucky parties have, we understand, placed saw mills at Essex Centre for cutting sycamore.

CHERRY.—A favorite and handsome wood, susceptible of a high finish, and making very rich furniture, or interior fittings for offices, &c. Ontario has but a limited supply remaining, and for this there are plenty of customers. Cherry has always been deemed a choice wood, and to-day has more admirers than ever. In two or three years, Canadian cherry must, at the present rate of consumption, become extinct, and then birch will come into vogue.

CHESTNUT.—In the fitting of hotels or offices, and in some interior fitting of churches, this wood is used, but only sparingly, because the tree is a large grained one. It will have to be resorted to as the butternut, which it resembles, becomes exhausted.

BEECH.—Not many uses have been found for beech, which remains one of our cheap and common hardwoods, to be had nearly everywhere. Tool-makers have use for it to make planes and tool-handles.

BALM.—A species of whitewood. It is used in place of basswood and real whitewood. It is called by some of the Americans cottonwood; but deemed superior to the wood growing along the Mississippi and State of Ohio. It also takes the place of inferior quality of pine. The counties of Kent and Essex produce it largely. It is used for stave and heading bolts, and a large quantity is sawed into lumber and shipped to the United States, where it is used in wagon shops, agricultural works and so forth. There is still a large quantity remaining, but it is being used up fast, as the demand for it is great, and good prices are obtained.—*Monetary Times.*

PROTECTION OF THE FORESTS FROM FIRE.

The following letter appears in the Toronto *Mail*:—

SIR,—From time to time articles and letters have appeared in the *Mail* and other papers lamenting the destruction of our forests by fire, and advocating measures for its prevention.

The Legislature now in session should pass some measure whereby the provisions of the Hon. T. B. Pardee's Firo Act could be practically enforced. As it now is, as far as preventing fires the Act is a dead letter. Its 14th clause provides that it shall be the special duty of every Crown land agent and bushranger to enforce this Act, and to prosecute every person guilty of a breach of its provisions and requirements; but as these men have no instructions or authority from their department to that effect, they can do nothing. And as for lumbermen taking up and prosecuting parties guilty of breaches of the Fire Act, it is simply absurd, as they would do it at the risk of having more of their limits purposely burned another year.

It would appear that some of the greatest fires have occurred since the passing of the Act, and this may be due to the fact that no person is afraid of being prosecuted under its provisions.

Most people are under the impression that it is only the license-holder who suffers from fires set out in the limits. They forget that every timber forest destroyed by fire represents so much revenue lost to the province, let alone the actual loss to the license-holder.

There is another great loss to be considered, and that is the loss to the country of the money which would be paid out in manufacturing and bringing this timber to market had it remained green.

During the summer of 1881 fires overran large parts of the Parry Sound and Muskoka districts and the country lying between the Georgian Bay and the Ottawa river, and according to an estimate made in the *Globe* of November 10th, destroyed $10,000,000 worth of pine in Ontario. This does not nearly cover all the fires, as there were many fires on licensed lands of which the public knew nothing, the holders of the limits burned keeping the knowledge of it to themselves, not wishing the value of their properties to be depreciated.

If these annual fires continue, in a few years they will make a large hole in the revenue of Ontario.

There was three-quarters of a million dollars in bouus alone obtained from the last sale of timber berths, and the duty on the timber growing on them will represent to Ontario, if not burnt, upwards of five million dollars, and perhaps more. As these berths are now being operated on, or likely to be within a few years, and owned by so many different parties, the risk of fires is much increased. Before the sale, these births were in their virgin state, and not much exposed to fires, being held by the Government, but now that operations have commenced on them, they will stand a poor chance.

There should be a distinction made by the Crown Lands Department between pine lands and hardwood lands fit for settlement. It is well known that in the back districts of Ontario and the Ottawa Valley the pine lands are generally not fit for settlement, and that where settlement has been made on them the settlers, instead of prospering, yearly grow poorer and poorer, till in many places they were actually driven from their holdings by starvation, as witness the Opeongo road, the Bouchere and Mississippi counties, which are now nearly deserts, nothing but dry pines to be seen as far the eye can reach, while on the other hand, those who settled on the hardwood lands have done well and made themselves comfortable.

Now that the country is mostly all surveyed, and the quality of the lands known to the Government, through the reports of its surveyors and bushrangers, it surely would be easy to make a distinction between lands for settlement and those for lumbering. A large portion of Opeongo and Bouchere country was not surveyed until after its settlement, and the Government had not therefore the knowledge they now have about their unoccupied lands.

It surely would not be to much to expect that the source of such a large revenue to this province as its timber forests should be better guarded against loss than it now is.

If the present staff of woodrangers was increased, and kept in the woods during the months of May, June, July, and August, to watch the Crown domain against fires, with authority to enforce the provisions of the Hon. Mr. Pardee's Fire Act, they would prevent many bush fires being set out. They should also be empowered to call on farmers, river-drivers, surveyors, and others who may have set out fires, to turn out and assist in killing them and preventing their spread. If one-fifth of the revenue which would have been derived from the timber destroyed by fire in 1881 alone had been expended in watching the Crown domain, it would have paid the salary of a large staff of men for several years, and it is more than probable that not much damage from fires would have occurred.

If persons holding and working limits, and their agents and foremen, were all held responsible for the damage done by the fires set out by them or their men, and also the heads of surveying or huuting and fishing parties, they would be more careful than they now are.

Practical bushmen say that it is not so hard as some would suppose to trace the makers of fires in the woods as it is to trace incendiaries in cities, and that almost all fires can be traced to their starting points, and generally the parties who set them out.

Yours, &c.,
Jan. 4, 1883. LUMBERMAN.

A QUESTION OF PROTECTION.

The discussion of tariff revision in the United States has brought up the question of the conservation and protection of the forests. Under the existing tariff a protective duty of one dollar per thousand feet is imposed on hemlock, basswood, whitewood and sycamore lumber imported into the United States, and of two dollars per one thousand feet on all other kinds of lumber. The report of the Tariff Commission recommends a reduction to seventy-five cents in in the former rate, but, inasmuch as the woods to which this reduction would apply, viz.: hemlock, basswood, whitewood and sycamore, are either found in large quantity only in the United States, or are little employed in the manufacture of lumber, the reduction proposed will cause no substantial diminution of protection to the lumber interest. What the freetraders desire is the abolition of the duty on all other woods, and more especially of that upon pine and spruce lumber, which are largely imported from Canada. The ground upon which this abolition is urged, if well taken, makes it questionable whether the effect of the removal of the duty will be altogether advantageous to Canada. It is that, with the duty removed, American manufactures will purchase a much larger por-

tion of their lumber in Canada and so check the exhaustion of the home supply that under the present circumstances is rapidly proceeding. The New York *Post* in directing attention to the subject thus states the case :—"Our forests are rapidly swept away by the drains now made upon them. They must be relieved, and their only possible relief is found in Canada. The $22,000,000 which the tariff takes from the pockets of consumers of lumber is unimportant in comparison with the indirect damage this tariff causes to the country by hastening the destruction of the forests. We must look this matter clearly in the face ; we must not deliberately allow our forests to be destroyed, and entail upon ourselves and our children all the evils which their destruction will bring, merely to make a few lumbermen rich. On this one point tariff reformers and protectionists can well meet on the common ground of public necessity. The future prosperity of the country is at stake." Taking the view that the conservation of our forests is of greater moment than their conversion into money, with the sources of employment which such conversion affords, it would be the course of prudence on our part to impose an export duty on all lumber sent out of the country. That is a proposition to which, however, scanty support would be accorded. We watch with concern the measure of our lumber exported, we trace in the expansion and contraction of that trade the measure of our commercial prosperity, we encourage in many ways the extension of lumbering operations, we are even eager to induce the United States to open its markets to the products of our forests free of duty, in order that we may more rapidly turn the fixed weath of our forests into floating capital. It seems somewhat curious to find an influential journal in the United States urging the abolition of the duty on lumber, less because it conceives that consumers will thereby gain an advantage in lower prices, than because the American forests ought to be preserved by the sacrifice of those of Canada. Our own conviction is that the abolition of the American duty on lumber imported from Canada would check in an unappreciable degree the destruction of timber wealth of the United States. With American markets adjacent to Canada, but remote from the centres of the home supply, such as those of New York State, freedom of import would cause an enlargement of trade, but when it is stated that the import of Canadian pine and spruce lumber into the United States is only one-twentieth of the total quantity annually manufactured in that country, it will be seen how remotely the question of the preservation of the forests is affected by the duty. The importance of conserving of forest wealth is yearly becoming more generally recognized ; it is being continually pressed upon the Governments of Canada and the United States by the press, and by the Forestry Congress, whose labors in this direction have been arduous and laudable. But it is a subject beyond the influence of tariffs ; it is one which each country must deal with directly through legislation tending to prevent the wanton destruction and waste of the forests now prevalent, and tending to the encouraging of tree-planting. If due care is exercised in this direction by our governments, the abolition of the American duty will be a matter of congratulation to us, as contributing to the enlargement of trade with the United States, without causing a counterbalancing loss in the rapid exhaustion of our lumber supply.—*Montreal Gazette.*

THE FOREST RESOURCES OF MEXICO.

The New Orleans *Times-Democrat*, in reviewing an article from *La Patria*, Mexican journal, gives the following concerning Mexican forests : Hitherto the vast pine, cedar, walnut and oak forests that are scattered so plentifully along the slopes of the Sierra Nevada and the Sierra Madre mountains, and on the sides of the mountainous ranges of tall foot hills that corrugate the surface of the country, have never been utilized. The ports on either coast and the cities of the interior connected with said ports by wagon roads were, and yet are, supplied by the saw mills of the Atlantic, Gulf and Pacific coasts. But the mere cost of transportation to the Mexican seaports, and from thence to the cities of the interior, renders the price of foreign lumber very high. For example, Orizaba, which is about 90 miles by railroad from Vera Cruz, consumes a fair quantity of lumber annually, yet sapless pine wood sells readily, at the railroad depot of Orizaba, for $75 per thousand feet. At Chihuahua, the capital city of the state of the same name, which is distant about 100 miles from one of the grandest pine forest regions on the planet, fine pitch-pine lumber often brings as high as $80.

It is a well known fact that the Mexican Central, the Mexican National and the Mexican Oriental Railroad companies have been compelled to purchase the vast quantities of timber consumed in their construction works, in the United States. Our southern mills have hitherto controlled this great traffic, but the time has at last arrived when Mexicans begin to appreciate the value of this business, and are making arrangements to secure by Government grant or otherwise, most of the timbor lands of the Republic.

Notwithstanding the fact that the greater portion of Mexico lies within the tropics, such is the peculiarity of its topography that most of the several states may be said to enjoy all varieties of climate, comprising the different grades from tropic heat to extreme cold.

Where the land attains an altitude of 4,000 or 5,000 feet above the sea, pine, oak, larch, sycamore, walnut, hickory and hard cedar trees flourish to perfection. The states of Sonora, Chihuahua, Coahuila, Durango, Sinaloa, Michoacan, Jalisco, Mexico, Hidalgo and Vera Cruz, possess an almost inexhaustible quantity of these valuable timber trees, as well as forests of mahogany, cedar, ebony, etc., which are produced in the lands lying in a lower altitude.

In view of these facts, and in consequence of the rapid development of the country by American railroad enterprise, the general government —where it possesses timber lamds—and also the state governments, have determined to grant liberal concessions to all capitalists who may desire to undertake the development of the vast lumber resources of Mexico.

The time is fast approaching when our southern timber dealers will appreciate the immense value of the forests of Mexico. This enterprise should be taken in hand by southerners. Mexico, for hundreds of miles, is divided from our southwestern territory by only a narrow, unnavigable river ; and while American lumbermen can supply the American market with Mexican lumber, produced on Mexican soil, they might at the same time furnish our southern timber mart with the precious woods, so sought after by the furniture makers of this section.—*Northwestern Lumberman.*

THE U. S. LUMBER DUTIES.

The New York *Sun* has the following article : The intelligent discussion which the action of the Committee of Ways and Means in recommending the retention of the duty upon lumber entering the United States has excited in all parts of the country, is gratifying, It indicates that purely economic questions are growing in popular favor, and that everything relating to our forests or forest protection interests the people.

It is probably this interest in forest protection, rather than the desire for cheaper lumber for the consumer, which underlies this discussion.

It is the height of folly, of course, to tax foreign lumber. The duties collected in this way by the Government are insignificant in amount, and every dollar thus collected is taken, over and over again from the consumer of domestic lumber for the sole benefit of the manufacturers. These have not the excuse of a weak and undeveloped industry which must be built up at the expense of the consumer for the general good of the country.

The manufacturers of lumber are rich, prosperous, and strong. Their methods and facilities for carrying on their business are unsurpassed. No possible competition can deprive them of large profits. If there exists in the United States a single industry which is in the position to flourish without protection, it is the lumber industry.

From purely economic grounds this duty should be removed. It has served to build up dangerous monopolies, and it represses the prosperity of the country. It is evident, however, that the wide interest manifested in this question arises less from the feeling that it is desirable to prevent monopoly than from the fact that the removal of this duty is the first, and an indispensable, step toward forest protection. The forest question is becoming one of the popular questions of the day, and everything which relates to the extent and condition of our forests is eagerly read and discussed. It requires no great knowledge of the subject to understand that if Canadian lumber is excluded by the tariff, the drain upon our forests must be greater than if Canadian lumber was allowed to compete on equal terms with the product of our own forests. The people understand this ; they understand that the destruction of the forests means something more serious than a dearth of lumber. They apprehend that the removal of the forests will be followed be severe climatic changes ; that the rivers of the country will often be changed to torrents or reduced to streamlets ; that springs and streams will disappear ; that agriculture will perish and manufactures languish. They see these evils hastened by the retention of this protective duty ; they ask themselves by what right the prosperity of the country is placed in jeopardy because it is the pleasure of a group of men to grow rich, and because Congress is too ignorant or too indifferent to stop this abuse. No more vital question can come before Congress ; perhaps no Congress has ever been called on to decide an economic question of greater moment.

Is there no man who can join the discordant elements of the Protectionists, the Tariff Reformers, and the Free Traders ; who can unite Democrats and Republicans on the broad platform of public necessity, to check this destruction of our wasting forests? Such a man will deserve the name of statesman and the gratitude of the country.

Log Slide.

THE *Northwestern Lumberman* says :—Parmelee & Son, Malone, N. Y., are logging on the slope of a precipitous mountaiu, near Lake Titus, Adirondack region. To get the logs down the mountain they have constructed a slide one-third of a mile long. It is said that the momentum of cannon ball is hardly equal to that with which the spruce sticks are hurled from the lower end of the slide. The *Courier and Freeman*, of Potsdam, in view of this device for denuding the mountain sides, gloomily exclaims : "This, and other similar items, shows that in a few years the Adirondack wilderness will be changed into a treeless scene of desolation. Its lakes, ponds and streams will dry up ; but so long as money is to be got the havoc will go on."

Devoted to Forest.

Mr. M. C. Read, of Hudson, Ohio, says :—In the Dominion of Canada are millions of acres of land which from the nature of the soil must be perpetually devoted to forest growth. They constitute the natural sources of a supply of lumber for the productive arable and pasture lands to the south of them, in the United States, as well as in Canada.

The time is at hand when we shall be wholly dependent upon this source of supply, or upon the artificial growth of timber in our own country, if the present rate of destruction of our forests is continued.

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MR. THOMAS W. RACE, Editor and Proprietor of the Mitchell *Recorder*, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Billiousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

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CALIFORNIA CEDAR.

The incense cedar (*Libocedrus decurrens*) is one of the valued trees of the California coast and mountains. It is eminently noted for great rapidity of growth, wonderful lightness, stiffness, and extraordinary durability. A thousand uses have sprung up and are multiplying around this interesting cedar as its most inestimable qualities become better known. Fortunately it is one of the most extensively distributed trees of the Pacific—found from the coast range north, south to San Diego, Sierra Nevada, southern Oregon, and most of the interior mountain region from 2,000 to 4,000 feet, and it even thrives quite well at 6,600 feet altitude, but seeming to give out at 7,000 feet, though said to extend to 8,500 feet, which is questionable. As usual with the sylva, flora, and fauna, this also is found lowest along the coast, where it finds the requisite temperature and other essentials, with combined moisture. The base or lower trunk somewhat resembles the Western juniper (*J. occidentalis*). It is to be noted in general that trees of such broad, outwardly sweeping, or expanded bases seldom blow over, and to the perceptive and artistic eye their significant character is one of firmness and stability. One hundred to two hundred feet high, six to nine feet in diameter (rarely larger) the shaft is often clear of limbs 80 to 100 feet, and although the lower limbs or even dry branches, may encumber the middle portion, pin-knots do not damage the timber. The massive body tapers more rapidly above than redwood, and is less eccentric than juniper, yet its general port resembles most the best specimens of the latter. The light cinnamon bark is thick and of shreddy-fibered texture, but so concretely compacted as to render the surface evenly ridged by very long, big bars of bark. These sweep obliquely down on the long spiral twist of swift water lines. The top is conic, the foliage is in compressed, flattened sprays, upright, thickened, and somewhat succulent; if not a languid type, at least in no sense rigid. It bears some resemblance to the great western arborvitæ (*Thuja gigantea*), but the tiny leaf-scales are opposite and quite awl-pointed. The general hue of the foliage is light yellowish green, warmly tinted, golden and bead tipped, with tiny, oblong male catkins, as the fruit ripens in October and November. The cones are pendulous from the tips of twigs, oblong, and seldom over three-quarters of an inch long, little more than one-third as thick, and for the most part slightly compressed. The wood is a pale cream tint in color—a delicate salmon shade. This would hardly warrant the name white cedar, sometimes applied to it, as well as the giant arborvitæ. The extreme lightness of the lumber and its sweetness for packing boxes will commend it for express and commercial purposes, for posts and fencing, and especially railway ties, for sleepers, stringers, and ground timbers of all varieties, and for unnumbered uses, a tithe of which cannot be told in a brief notice. Formerly these trees were cut away and burned up to clear the track for redwood, tamarac, and ponderous pith-pines, etc.; now all else is superseded by this incense cedar. Thus is seen how hasty and ill-advised notions give place to genuine merit.

A fungus *(dædalus)* attacks and honeycombs it; and riddled as it may occasionally be, still, if spike or nail finds substance enough to hold, or sufficient solidity to resist crushing, then, for many purposes, even such lumber is practically as good as the soundest timber; because when the tree dies the fungus dies, and thenceforth will absorb no more moisture than the soundest part, and is alike imperishable, contrary to common experience in such cases. This is a timber nearly as lasting as solid granite. For ship or boat lumber, the clear stuff from sound wood is so exceeding y light, stiff, and durable, and so plenty and available, that few timbers excel it, unless the yellow cedar or cypress (*Cupressus nutkaensis*) is excepted, which is a little tougher, stronger, perhaps more elastic, and equally durable, if judged apart from thorough tests and careful data, which, it has been remarked, the apathy or ignorance of some governments appear to deem unworthy their sublime attention. There are said to be in California a thousand times more and better kinds of naval timber on government land as important to preserve as the live oaks of the South Atlantic states. It has been asserted as possible that, after due investigation, California would be found to possess a vast amount of the best naval timber in the world, a hundredfold more lasting than the best now in use, if a few woods are excepted, of which there is understood to be no very adequate supply.

The great Washington cedar (*Sequoia gigantea*) is another important California tree. The great sequoian timber belt lies along the Sierras, upon the first exposed mountain side—moraines of recent retiring glaciers—that face the Pacific, from Calaveras on the north to near the head of Deer Creek on the south—a distance of 200 miles, or a little above 38 degrees north to a little below 36 degrees; altitude 5,000 to 8000 feet and rarely 8,400 feet. The belt is broken by two gaps, each 40 miles wide, caused by manifest topographical and glacial reasons, one gap between Calaveras and Tuolumne, the other between Fresno and Kings river; thence the vast forest trends south, across the broad basins of Kaweak and Tule, a distance of 70 miles, on fresh moraine soil, ground from high mountain flanks by glaciers. The inscriptions are scarcely marred by post glacial agents, and the contiguous water-worn marks are often so slight in the rock-bound streams as to be measured by a few inches. Rarely does one of these sound and vigorous cedars fall, and those that do will lie 800 to 1000 years, scarcely less perishable than the granite on which they grew. The great sequoian ditches, dug at a blow by their fall, and the tree tumuli, always turned up beside the deep-root bowls, remain; but, scientists assert, not a vestige of one outside the present forests has yet presented itself, hence the area has not been diminished during the last 8,000 or 10,000 years, and probably not at all in post glacial times. These colossal sequoias rise 275, 300, and even 400 feet aloft; are 20 to 30, and in some rare cases 40 feet in diameter, looking like vast columnar pillars of the skies. No known trees of the world compare with them and their kin, the redwoods, for the focused proximity of such a marvelous amount of timber within limited areas—as it were, the highest standard of timberland capacity. The stage coach passes through one; 120 children and a piano crowd inside another; a trunk furnishes a house for cotillon parties to dance "stout on stumps;" a horse and rider travel within the burnt out hollows of others, and so on. A single tree would furnish a two-rail fence 20 to 30 miles long. The tree has great value for wood and lumber.—*Northwestern Lumberman.*

A FRENCH COMPANY.

Commenting on Mr. Senecal's late visit to Europe the *Witness* says: "Another great scheme said to have been inaugurated in Paris is a new colonization company, which, it is said, will be formed with a capital of $10,000,000, to acquire lands for colonization purposes in the province of Quebec. Lumbering operations will also be included in the business of the company, as well as mining operations of all kinds. The company, after making all preparations, such as the building of houses, etc., will bring immigrants from all parts of the old world, and give them a house, with a certain lot of land; thus the immigrants will have every convenience. It is also the intention of the company to construct large grain elevators for the purpose of storing grain in the winter at some central shipping point. The company will also, if circumstances warraut it, extend their operations to build large mills, and instead of exporting the wheat they will export the flour. It will make an endeavour to manufacture a great portion of the North-West wheat and export it as flour."

U. S. WOOD AND LUMBER TARIFF.

The committee of ways and means have completed the wood and wooden ware schedule of the proposed tariff, and the bill which they are preparing will, unless changes are hereafter made, provide for the following rates of duties:

Timber, hewn and sawed, and timber used for spars and in building wharves, 15 per centum ad valorem.

Timber, squared or sided, not specially enumerated or provided for in this act. ¾ cent per cubic foot.

Sawed boards, plank, deals and other lumber of hemlock, whitewood, sycamore and basswood, 75 cents per 1,000 feet board measure: all other varieties of lumber, $2 per 1,000 feet, board measure. But when lumber of any sort is planed or finished, in addition to the rates herein provided, there shall be levied and paid for each side so planed or finished 50 cents per thousand feet, board measure; and if planed on one side and tongued or grooved, $1 per thousand feet, board measure; and if planed on two sides and tongued and grooved, $1.50 per 1,000 feet, board measure.

Hubs for wheels, posts, last blocks, wagon blocks, ore blocks, gun blocks, heading blocks and all like blocks or sticks, rough hewn or sawed only, 20 per centum ad valorem.

Staves of wood of all kinds, 10 per centum ad valorem.

Pickets and pailings, 15 per centum ad valorem.

Lath, 10 cents per 1,000 pieces.

Shingles, 35 cents per 1,000.

Pine clapboards, $1.50 per 1,000.

House or cabinet furniture, in piece or rough and not finished, 30 per centum ad valorem

Casks and barrels, empty, sugar box shooks and packing boxes, and packing box shooks of wood, not specially enumerated or provided for this act, 25 per centum ad valorem.

Manufactures of cedar wood, granadilla, ebony, mahogany, rosewood and satinwood, 35 per centum ad valorem.

Manufactures of wood or of which wood is the chief component part, not specially enumerated or provided for in this act, 35 per centum ad valorem.

Wood, unmanufactured or not specially enumerated or provided for in this act, 20 per centum ad valorem.

The changes made in the above list from the existing tariff commission report are as follows:

On hewed and sawed, etc., the present tariff is 20 per cent. ad valorem; the commission report is 20 per cent.; the committee reduce to 15 per cent.

On timber squared and sided the present duty is 1 cent per cubic foot; the commission report in favor of the existing rate; the committee reduce to ¾ cent per foot.

On sawed boards, planks, deals, etc., of hemlock, whitewood, sycamore and basswood the existing rate is $1 per thousand feet board measure. The tariff commission report is the same. The committee cut this down to 75 cents per thousand feet.

All other varieties of lumber are unchanged at $2 per 1,000 and existing rates on planed and tongued and grooved lumber are adhered to both by the commission and the committee.

On hubs of wheels, posts, last blocks or rough hew or sawed existing rates are continued,

Staves of all kinds are placed at 10 per cent., both by the committee and the commission. The existing rate of 20 per cent. on certain undressed staves appears to be put in the 10 per cent. class.

The committee put the duty on pickets and pailings at 15 per cent. ad valorem. The commission reported in favor of 20 per cent., which is the present rate.

Laths are put at 10 cents per 1,000 pieces. The commision reported in favor of continuing the existing rate, 15 cents.

Shingles, cabinet furniture, dressed and undressed, are maintained at the existing rates. Empty casks and barrels, sugar boxes, shooks and the like are placed by the committee at 25 per cent. ad valorem. The commission recommended 30 per cent., which is the present rate.

Pine and spruce clapboards, manufrctures of cedar wood, etc., are maintained at existing rates.

SWEDEN.

THE Stockholm correspondent of the *Timber Trades Journal*, writing on Dec. 16, says:—Since my last report there is a decided stiffening feeling prevalent amongst holders of sawn stocks in the north of Sweden. As far as can be ascertained, this alteration has been brought about partly by the issue of a very favourable circular from the leading Loudon brokers, and partly by the fact of two or three good contracts having been closed in Hudikswall and Gefle districts, at prices very near to those of last season. Nevertheless, looking to the extraordinary shipment of the past year, and the heavy stocks that are supposed to exist in at least two of the principal shipping districts, it will probably not be considered wise to stand out for the full prices obtained during the early part of the past season. This applies to redwood, but as for whitewood I cannot see that there is any necessity for our Sundswall and Hernosand exporters selling at the low figures they are said lately to have done. The prices of similar goods from Canada, coupled with the decrease of production in the Riga and contiguous districts, consequent on the burning of mills, stocks, &c., and the difficulty experienced in getting anything insured during the terrorism prevailing there, should enable Swedish holders of whitewood to insist on last season's figures at the very least. It may, I think, be taken for granted that anything less than £5 per standard for unsorted white battens f. o. b. Sundswall or Hernosand does not leave a living profit, taking the risk of six months' credit into consideration, and there would be no difficulty in obtaining this figure at present, were the smaller mills in the two districts referred to not in the habit of loading themselves with goods beyond their financial powers.

IMPERFECT APPLICATION OF CREOSOTE.

A correspondent of the *Timber Trades Journal* says:—It is important that the attention of those who make the creosoting of timber their business should be directed to the imperfect manner in which a great deal of the creosoting work is now being done. I have it in my own knowledge that, in the case of an order for wood recently ordered to be creosoted, the wood was *dipped* in the creosote instead of the oil being *injected into it* by pressure.

When wood which has not been previously dried has applied to it a coating of creosote, or any other material which clogs the passage of air from the interior, the elements of decay, being confined, rapidly assume activity, and consequently the application is more hurtful than advantageous. This fact does not appear to have received general recognition, and the system, therefore, of simply *tanking* wood in creosote continues in existence.

I would advise engineers and others who may be making use of creosoted timber to apply the test, here and there, of having the wood sawn though, so that it can be seen whether the creosote oil has thoroughly penetrated the wood. The test is an easy and satisfactory one, and I understand that in cases where it has been applied it has been found that the application of creosote has been of a most superficial nature, and that in consequence the wood has been returned to the senders.

A Successor to White Pine.

A noteworthy fact in the lumber business of Chicago, says the *Times*, is the annual increase in the supply of southern yellow pine manufactured in Missouri and the gulf states. By many it is claimed that this lumber will be the successor of white pine in western markets should the supply of the latter cease as soon as now predicted. At this time, however, the cost of transportation does not allow large shipments of southern lumber, and long timber and dressed flooring are the only grades of yellow pine sold in Chicago. The latter, being dressed before shipping, is greatly reduced in weight, and at current prices affords a satisfactory profit. Enough lumber has already been received from the south to remove any fear of a lumber famine in this city for many years, as, if it can pay present rate of freight, it will come naturally to a large market when the sonth has more railway competition, which increasing wealth and enterprise are sure to supply.

Letter from Member of Congress.

HOUSE OF REPRESENTATIVES.
Washington, D.C., Feb. 19, '82.

GENTLEMEN,—Inclosed find $1, and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a bad cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GRANT.

WOOD OR IRON.

The Montreal *Gazette* says:—The great fire which did so much damage in London on the morning of the 8th instant brought out a fact with regard to the use of iron girders in buildings which is worth reproducing. Speaking of the heat evolved by the rapid combustion of the highly inflammable materials which fed the fire, the London *Daily Telegraph* says:—"It is of interest to note the effects of intense heat like this on different constructive substances. There has been a tendency of late years to trust to iron, but yesterday's test was altogether unfavourable to this substitute for wood. An experienced officer of the Fire Brigade remarked: "Whenever we know there are iron girders and pillars, we give them a wide berth. They expand so much that you can never be certain of them. Take a floor resting on wooden beams—say, twelve inches by eight. It will burn for hours without giving way, and will not swell at all nor displace any part near it. Not so with iron; it soon becomes red hot, expands with terrific force, and, as I think, does more harm than good." This view was confirmed by the fact that buildings like the Curriers' Hall, the rear walls of which were subjected to a terrible scorching, escaped with little damage, while in no case did the iron partition seem to be of avail. Mr. Simon, the second officer of Captain Shaw, * * was directing operations on the top floor of the warehouse of Messrs. Rylands on London-wall. The roof was ignited, but the firemen were gaining upon it. Between the upper storey and the next building there was the protection of a stout wall, the only communication being barred by an iron door. Presently the door was red-hot, then it burst in through the resistance of the walls to its own expansion, and in a few seconds the whole of the floor was ablaze, the Brigade with difficulty effecting their retreat." Such experience is strong confirmation of the view expressed above.

The Toronto Trade.

The *Mail* says:—The lumber trade of this city during the year 1882 has been rather larger than that of 1881. There was more demand from outside upon merchants here, and local consumption was also about equal to that of the previous year. The supply last year of lumber was not so large as was expected, or hoped it would be, owing to the want of snow in the woods. And the average prices of lumber were therefore higher than would have been the case if the operations had been more successful in the woods.

After giving the figures of the CANADA LUMBERMAN for the year's business the *Mail* continues: The prospects for a large trade this year are very fair. There is no question about the steadiness of the market. The demand from Manitoba is expected to be again large, and the American market is certain to be at least as good as last year. There is said to be now some trouble in the woods from snow, which is to deep for profitable work. But this is better than having too little, as was the case last year. And the cost of supplies and wages this winter are in the lumberman's favor. It is thought the production will equal what it was last year.

Preserving Posts.

A writer in an exchange says: "I discovered many years ago that wood could be made to last longer than iron in the ground, but though the process so simple that it was not well to make a stir about it. I would as soon have poplar, basswood or ash as any other kind of timber for fence posts. I have taken out basswood posts after having been set for seven years and they were as sound when taken out as when first put in the ground. Time and weather seemed to have no effect on them. The posts can be prepared for less than two cents apiece. This is the recipe: Take boiled linseed oil and stir in pulverized coal to the consistency of paint. Put a coat of this over the timber, and there is not a man that will live to see it rot."

THE Ottawa lumbermen are suffering inconvenience from the dangerous character of the ice on the lakes on the Kippewa and other lumber districts.

The Duluth Lumber Lands.

The *Northwestern Lumberman* says:—The Duluth land sales were finished up on Saturday, December 16, on which day a few less than 500 sales were made. In township 64 there was 188 sales; in township 65, 172 sales; 62 sales in township 63, and 40 sales in township 62. As high prices as $10.50 and $17.50 are given in the published reports of the sales, but a great deal of the land went at $1.25, or between that figure and $2. The sales lasted two weeks, and Uncle Sam has gone home with his pockets jingling with monopolistic coin.

THE Lindsay *Post* says:—We believe that Messrs. Needler & Sadler are contemplating putting in a 30-h. p. engine to drive their sawmill during the low water season. This improvement, if carried out, would probably be available to give additional power to the waterworks pumps at a time of the year when such assistance might be necessary.

THE Ottawa *Fress Press* says:—Mr. J. G. Doherty, of this city, who is engaged in the manufacture of portable houses, and had the contract for those supplied to the Government at Regina, is in Winnipeg. He contemplates the starting of a manufactory at Winnipeg or some other point for the manufacture of these houses.

A WRITER on the health of London, England, recommends that trees be thickly planted between that city and the swamps of Essex and Kent. The idea is not merely to reclaim these marshes, but to make the trees a barrier against the winds which now drive malarious air into the city. The trees may be set out without danger, provided the work be not done at night.

THE Montreal *Gazette* of Jan. 4, under the head of "lumber," says:—The only thing worthy of remark in this line of trade is that a slightly better local demand has been experienced since our last report at steady prices. The demand for hardwood continues good, stocks are none too heavy and the outlook is favourable for a healthy year's business.

THE stock of deals in St. John, N. B., held for European markets amounts to 59,000,000 feet. Of this amount 37,000,000 feet are owned by Mr. Alex. Gibson, 12,000,000 feet by Messrs. R. A. & J. Stewart, and 10,000,000 are in the hands of other shippers and owners. All of the stock is sold for shipment except 31,000,000, and 25,000,000 of these are held by Messrs. Carlton Bros., Carleton.

AN Ottawa correspondent says:—R. A. Campbell & Co. are building a new steam saw mill at Lachute, the dimensions being 56 by 112 feet. It will be completed by May next. The sawing capacity of the new mill will be about 25,000,000 feet in the season. Messrs. Ingl's and Hunter, of Toronto, have the contract to put in the boiler and engine, while Messrs. Stewart and Fleck will supply the remainder of the machinery. Mr. E. Bullis is erecting the new structure.

THE *Timber Trades Journal* says:—It is the opinion of many in the trade that the development of steam traffic in the timber trade will ultimately result in the establishment of lines of steamers from many of the Swedish ports. Only those established in a considerable way of business are able to deal with an entire steamer load; but when lines of steamers are running to the wood ports, it will, doubtless, be quite feasible to import small parcels of stock, say 50, or even 20 standards. It is not at all improbable that the trade may progress in this direction.

WALTER LINTON, of Waterloo, writes that Hagyard's Yellow Oil has done great good in his family, his wife being cured of Callouse lumps that other medicines failed to remove, he he also states that a neighbor was promptly relieved of Rheumatism by the same remedy.

WORTH KNOWING.—A Fact Worth Knowing. The best household remedy known for Coughs, Colds, Bronchitis, Asthma, Whooping Cough and all throat and chest troubles tending toward Pulmonary Consumption is Hagyard's Pectoral Balsam, to be procured of any druggist.

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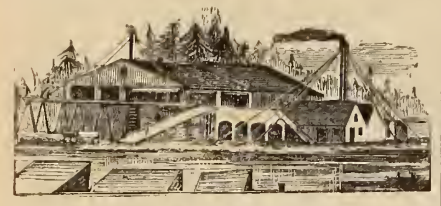

THE CANADA

LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JAN. 15, 1883.

THE German empire has now about 34,000,000 acres of forest, valued at $400,000,000, and appropriates $500,000 every year to increase and maintain the growth of trees.

MR. R. NAGLE, lumberman, has disposed of a timber limit of 150 miles on South River, Lake Nipissing, to Mr. Alexander Fraser, of West Heath, the price paid being $150,000.

THE Midland *Free Press* says:—Shipments of lumber are going on steadily at the British Canadian mills, Chew's mill and Dollar's notwithstanding the deep snow that prevails.

THE *Monetary Times* in its Montreal report says of lumber:—Business continues dull, and is likely to remain so for a while. Lumberers as a rule have made their calculations to produce largely, and the season promises well so far, for snow has fallen plentifully in lumbering sections as a rule.

WM. & GEORGE STUBBS, at Moose River, Lake Winnipeg, have erected a mammoth saw mill. They have 75 men at work in that vicinity, and will probably cut enough logs to manufacture 5,000,000 feet of lumber next summer. They also intend getting about 1,500,000 feet out of the Winnipeg River.

THE Lindsay *Post* says:—We believe that Messrs. Needler & Sadler are contemplating putting in a 30-horse-power engine to drive their saw-mill during the low water season. This improvement, if carried out, would probably be available to give additional power to the waterworks pumps at a time of the year when such assistance might be necessary.

A REMARKABLE statement was made recently before a scientific body in London—the statement given is on the authority of Mr. Veitch, the well known authority on "Coniferæ"—that the cones of many of the species on the Pacific coast never open and permit the seed to escape unless opened by a forest fire, when they fall out and replenish the burned waste. "They hang on the trees for many generations—even for thirty years."

A KINGSTON despatch says:—Messrs. Rathbun have effected a contract to furnish the Canada Southern railway with from 120,000 to 200,000 railway ties. The same firm have also recently received orders for a larger number of doors for South Africa and Kingston, Jamaica. Including those engaged in logging operations, there must be at present 1,000 men on the pay roll.

OLD Italian oak is of the darkest and richest brown, and is very rare. A masterpiece of antique carving in this material is conspicuous upon the lid of a coffer, which is supported upon the shoulder of griffins with glaring eyes and fangs. Upon the front a sea piece, with Neptune riding his sea horses and triumphant over sea monsters, is wonderfully reproduced in carving.

THE old machinery of the big mill at Deseronto has been taken out, in fact, scarcely anything is left but the walls and roof. A large force of skilled mechanics are replacing the woodwork and preparing the foundation for the gangs. The new machinery when in operation will have cost the firm about $50,000. The estimated output for next season exceeds 30,000,000 feet.

THE *Northwestern Lumberman* says:—A tall story is told of a woman of Arbela, Mich., who, it is said, has gone into the woods with her husband and done her half of the sawing, splitting, and piling four cords of wood in a day, and can keep it up for any length of time. She weighs 120 pounds, and is 38 years old, of English descent, and the strangest of all is she says she never saw a tired day in her life.

THE Duluth *Lake Superior News* says:—The lumber business only as far back as 1878 was dependent upon two or three small mills that turned out annually ten or twelve million feet. The past year the cut at the immediate head of the lake alone amounts to 94,500,000 feet, and in Duluth district to 145,000,000 feet. The amount of logs under contract to be cut this winter in this district is estimated at 315,000,000 feet.

AN Ottawa correspondent says:—R. A. Campbell & Co. are building a new steam saw mill at Lachute, the dimensions being 56x112 feet. It will be completed by May next. The sawing capacity of the new mill will be about 25,000,000 feet in the season. Messrs. Inglis & Hunter, of Toronto, have the contract to put in the boiler and engine, while Messrs. Stewart & Fleck will supply the remainder of the machinery. Mr. E. Bullis is erecting the new structure.

MESSRS. WANZER & Co., Hamilton, are erecting a new building, 250x60 feet, three stories high, for the purpose of manufacturing the wood work of their sewing machines. The machinery, to be operated in this building, is valued at about $30,000. The power to drive this will be furnished by one of Killey & Co.'s 300 horse power engines. As an evidence of the growth of the export trade of Wanzer's concern it may be stated that 1,000 of its machines are now used in Africa.

EDDY'S NEW MILLS.

Work is being carried on with wonderful rapidity at Mr. E. B. Eddy's new mills in Hull. The irregular bottom of the new sawmill has been filled up with massive timber cribbing and broken rock making it almost as solid as rock. The northern wall is up and presents a massive appearance as does the part of the southern wall which is almost complete. The floor being laid down is three inches thick and will be more solid than any in the city. Situated on this floor are four posts on which are electric lamps which are used at night to enable large gangs to work. Altogether there are over a dozen electric lights going at night and this enables twice the work to be done that would otherwise be possible. The motive power for the generator is furnished by the water wheel in the machine shop. In this building everything indicates a rush of business. A large number of machinists are engaged turning out shafting and everything required in rebuilding or refitting a mill. The massive planer and turning lathe which went through the fire are again in first class order and none the worse of the test. Other machines have been added and the shop is in full blast. The pail and tub factory presents a lively appearance. All the floors are replaced, and the walls have been thoroughly plastered up, and are apparently as strong as ever. Machines are already being placed in position, and hundreds of feet of shafting are suspended in position from the ceilings. A very noticeable feature here is the heavy timbers to which the pullys and shafts are attached. From the way work is being pushed on at present, it is not at all unlikely that work will be commenced early next month. Several wood working machines, including planer and morticer, have been placed in the new building erected on the site of the old sash and door factory. Next door is the blacksmith shop, which is the scene of industry day and night. In both of these buildings are electric lights. The masonry and carpenter work is going on marvellously, large gangs being engaged drawing, framing and placing massive beams in position.—*Ottawa Free Press.*

HOW WOOD WILL LAST.

The following testimony to the durability of wood is published: Charred wood, or charcoal, is almost indestructable, whether exposed to the air, buried in the ground or placed under water. Wood, in its natural state, well seasoned and kept dry, may be eaten by worms; if wet and dry alternately, it rots; if kept wet all the time it lasts a very long time—though how long nobody knows. One of the piles of a bridge built across the river Danube by the Emperor Trajan, when taken up in recent times, was found to be petrified to the depth of three-forths of an inch, but the rest of the wood was little different from its ordinary state, though it had been driven more than 16 centuries. The oldest wood bearing the marks of human labor is said to have been found in some of the tombs at Thebes, and comprised two wooden statues a little larger than life. The oldest timber afloat is probably in a ship now sailing from Holland, that was built in 1563, when the Prince of Orange was fighting Phillip II, of Spain. In digging away the foundation of old Savoy Palace, which was built nearly 700 years ago, the whole of the piles, consisting of oak, elm, beech and chesnut were found in a state of perfect soundness, as was also the planking which covered the pile heads.

TIME TO FELL TREES.

Mr. Edmund Hersey, a farmer of exceptional intelligence and practical culture, says observation of the changes in the living productions of the earth has been a continual source of joy to him, though able to comprehend little of the marvellous teaching. His investigations have been especially directed to forestry and woodcraft during a considerable part of his life, cutting, seasoning and working up various kinds of timber in the different months, sometimes to the extent of nearly a thousand cords a year. The chemical laboratories of nature so minute yet so wonderfully efficient, are not open to him, he simply contemplates results as disclosed to "eyes that are holden." These, so far as they relate to the subject of our head line, he condenses as follows in the Massachusetts *Ploughman*:

"For strength, beauty and durability I have found August, September and October the best, and February, March and April the worst months to cut wood. A red maple cut in September will keep in a round log perfectly white and sound until the next August; while one cut in March will begin to blacken and decay by the middle or last of June. This is not copied from any scientific work, but is what I have found to be a fact by many practical tests. Gray birch cut in September will keep in good condition until the next September if left in the woods, cut in four-foot lengths; while if cut in March and left in the same way it will be nearly worthless by the first of August; at least such is the result on my land. White pine, like the red maple, keeps white much longer if cut in September than if cut in March, and is not injured by the worms as much. I have found that wood dried slowly in a cool place is better than that dried quickly in a hot sun, even though cut in summer. May this not, in a measure, account for wood being better cut in autumn, it having the long cold winter to dry in?"

THE MICHIGAN LAW FOR TREEPLANTING BY THE ROADSIDES.

The *American Journal of Forestry* says:—The Consolidated Road Act of Michigan, approved June 8, 1881, presents one feature in respect to planting by the roadsides that deserves attention; and as the season has come around at which the Legislatures of most of the States are in session, we present below, so much of the law as relates to this subject. It will be seen that it is obligatory upon townships, unless by a vote at a town meeting, the citizens excuse themselves from its operation, and that unless so determined, the work must continue from year to year, until all the roads are planted.

We regard this law as eminently progressive, and especially worthy of imitation in the Prairie States:

CHAPTER X.

SHADE TREES AND WATERING TROUGHS IN HIGHWAYS.

"SECTION 1. Shade-trees shall be planted along both sides of the public highways, at the uniform distance, as near as may be, of sixty feet apart, and not less than twenty-three nor more than twenty-five feet from the centre line of the highway, but the township board of any township may direct as to the distance which trees may be set from each other or from the outer line of the highway. All trees now growing upon the sides of any highway, and all trees that may be hereafter planted thereon, standing more than 60 feet apart, shall be preserved, and shall not be injured or removed, unless by direction of the Commissioner of Highways, and with the consent of the owners of the adjoining land, unless such trees shall interfere with or obstruct the travel on the highway: *Provided*, That the provisions of this Chapter in whole or in part shall not be deemed mandatory in townships in which the electors may by vote at a township meeting thus determine.

"SECTION 2. Any person planting shade-trees along the highway adjacent to property owned or occupied by such person, shall be entitled to be credited twenty-five cents upon his highway tax for every tree so planted, but not to exceed in the aggregate twenty-five per cent. of such person's highway tax in any one year.

"SECTION 3. In road-districts where there are not trees planted and growing along the highways to the extent required by the first section of this chapter, the Commissioner shall require that at least 50 acres per year be so planted in each district, and shall require the same from year to year, until every highway in his township where the adjoining lands are cleared, is supplied with shade-trees, as contemplated by said first section, but not more than twenty-five per cent of the highway tax shall be appropriated for such purpose in any one district in any one year. The overseer, acting under the direction of the Commissioner may require twenty-five per cent of the highway-tax of any person in any year, to be paid in money, the same to be applied in planting shade-trees along the highway adjoining the property of such person. The overseer shall particularly attend to the planting of such trees, and shall allow no unsuitable tree, nor any tree wanting sufficient roots or vitality to be planted, and he shall have the charge of and care for the same in the best manner for their growth.

FORESTRY IN SWEDEN.

We take the following extracts from a paper contributed to the *American Journal of Forestry* by the editor, Dr. F. B. Hough. It is from an account of a trip to Swedeu:—

Aug. 8. Having called at the American Legation, and learned from our Minister-Resident, Mr. Stevens, that the Director of Forests, (Mr. C, A. T. Bjorkmanu), was absent, but that his deputy, (Mr. E. G. Sundberg), was in town, we called at the "*Skogs-Styrelsens.*" (Forest-Adminstration), aud made known the object of the visit. Mr. S. received us with the greatest civility, and afforded full information in the way of recent documents, blank forms, maps, and explanatory statements, concerning the forest resources of the country, and their

methods of management. The government has a Forest Academy adjacent to the city, near a public park, known as the *Djurgard*, (Deer-Garden). a place of great popular resort. It is on the main shore, but close by a large island, with many pleasant villas and beautiful walks. It is very easily accessible by steam ferries and tramway, and upon the grounds in the park are various statues and points of historical interest. The grounds of the "Skogsinstitutet," (Forest Academy), were closed for vacation, but the information already obtained from Mr. S. supplied the data for every thing relating to its organization, and the course of instruction. There are besides this, seven elementary forest-schools in Sweden, for the preparation of agents of lower grade. They are of an eminently practical kind, and a part of the time of the students is given to actual labours in the forests.

In former times, there were restrictive measures, with regard to private forests, which in time were removed, but now, there is a tendency in Sweden, to a return to a policy, which although it interferes with the enjoyment of personal rights, appears to be dictated by necessity. In the district of Norrland, there has recently been established a restriction upon the size of trees that may be cut, the details of which we can not here give. They will be presented in our official report.

The forests of Sweden are chiefly fir, (*Picea excelsa*), and Pine, (*Pinus sylvestris*), with Birch, Alder, aud Poplar. Some oak is found south of of the Dalelf, and Beech, in the extreme south, opposite to Denmark. Besides these, there are some little plantations of White Mulberry, and other exotic trees. The total area of Sweden not covered with water, is 40,672,000 hectares, of which 4,693,000 are fields and meadows. Of the balance, about 40 p. c. of "terra firma" are forests, and of these two-thirds lie north of the Dalelf.

At the close of 1876, the woodlands in state parks amounted to 1,843,600 hectares;—state plantations on shifting sands, 2,200;—state woodlands not marked out 1,344,000;—woods on state domains and manses farmed on state account, 49,100;—ceded to officials, ecclesiasti cal and other, 530,900;—owned by public institutions, 35.60; granted to saw mills, 244,100;—grauted for metalurgical uses, 28.00;—owned by communes, 172,200; and owned by state manses, and in clearing concessions, 971,500, making a total of 5,221.500 hectares, (12,897,105 acres), under state control. The private forests of the country amounted to 30,757,000 *h.*, (75,972,260 *a.*), or about 85 p, c. of the whole.

A serious strike among laborers in 1870 in the Sunswald district, made it necessary to employ troops to prevent excesses. From this and other causes, the timber trade was disturbed, and of 890,000 dozen logs, but 500,000 dozen were got down to the Gulf of Bothnia in 1881.

Returning to Stockholm, we took passage iu the afternoon of the 9th of August for Hango, in Finland, near which place my Scotish friend of Haddington, thought I would find *Evois*, the next point of interest. It is the seat of a school of Forestry, under the direction of Mr. A. Blomquist. We had corresponded much with this gentleman for several years; he was expecting our arrival and many pleasant anticipations were borrowed from the near future, which were soon more than realized.

As we were going on board the Aura, a young man belonging to the Forest Aministration, who had been an eager listener the day before, came to place in our hands, a personal souvenir from himself, of several recent publications upon Forestry, and to ask some questions about the forestry of the future in America. Perhaps among the many thousands of Scandinavians who have found a home among us, there were some who were bound to him by ties of kindred —perhaps by something stronger. At any rate he was eagerly in quest of information about our woodlands, their extent, and their future prospects,—and we doubt not he could easily be persuaded to learn more about them by personal observations.

SUCCESSION OF FOREST GROWTHS.

Robert Douglas gives in a brief letter to the *Gardner's Monthly* some interesting facts concerning the succession of forest growths—the result of years of obscrvation. Where the forests are cut down, and the fires are kept out, they in the main reproduce the same species. But if a settlement is formed, and cattle are allowed to run into the cut-down woods, the seedlings are destroyed as they appear. In a burned forest everything is changed; all vegetation is swept away. Even the soil is changed, and its surface, if thin, is destroyed. After a forest fire, the first tree that makes its appearance is the aspen, a tree which naturally grows on moist lands, where its roots have the best chance to escape from the general destruction. According to Mr. Douglas, this tree predominates in burned forests in Colorado, Wyoming, Dakota, the Black Hills, Minnesota, Manitoba, Wisconsin and northern Michigan. In Wisconsin and the Black Hills it is mixed with the white birch, and occasionally, as in northeastern Wisconsin, the white birch is the chief tree. Both the seeds and trees of conifers are usually destroyed by a fire. Next to the aspen and white birch, those trees and shrubs spring up over burned districts which bear seeds that are either blown to great distances, remain long in a dormant state in the ground, or are carried by birds. Where the burned forests consisted of oaks and pines adjoining or partly intermingled, the oaks will be found after a fire crowding upon the pine lands. This is due in part to the fact that oaks renew themselves from the stumps, while pines do not, and that acorns are often buried by squirrels in spots favorable to their speedy growth.—*Northwestern Lumberman.*

CEDAR HOP POLES.

The Hamilton *Spectator* says:—Mr. S. W. Davis, of Bouckville, near Utica, New York, was in the city Thursday, and went north on the Hamilton and Northwestern to visit Beeton and the surrounding country in search of hop poles. He saw Brennen & Sons, of this city, while here, and will probably make an arrangement with them to buy some of their cedar poles in Cayuga swamp. Mr. Davis says that hops now being from 75c to $1.05 per lb., the people of Central New York are going to extend their hop fields very much next season, and will want a good many poles. He prefers cedar poles over hardwood because they last longer and are lighter to handle. They are very expensive in Central New York, and Mr. Davis thinks he can make a spec buying the poles in Canada. They will cost him perhaps ten cents each, and the duty going into the United States is 20 per cent.

A WONDERFUL TIMBER REGION.

Very far west indeed, in a lovely country which once belonged to England, but which was ceded to the United States in 1846, there grows the finest body of timber in the world. Fir and pine, oak and cedar, of unsurpassed quality, and practically unlimited in quantity, clothe the mountains, overhang the rivers, and shadow the plains of the Puget Sound district, in Washington territory. On a moderate estimate it is calculated that this region will yield the enormous and unimaginable quantity of 160,000,000,000 feet of valuable timber. The trees attain a remarkable development, both of height and beauty. The yellow fir is frequently found growing to a height of 250 feet; the white cedar to 100 feet, with a girth of over 60 feet; and the white oak to 70 feet; whilst ordinary sized specimens of the sugar pine yield from 6,000 to 8,000 feet of lumber each. For long after its discovery this marvelous store of timber remained undisturbed, its primæval quietness unbroken by the sound of the woodman's axe. But in 1851 a saw mill was built on Puget Sound, and thenceforward continually increasing inroads were made upon the forests, until to-day no less than fifteen such mills are at work upon it. The largest of these has a cutting capacity of 200,000 feet per diem. During the year 1881 the export of lumber from Puget Sound amounted to 174,176,700 feet, valued at nearly $2,000,000, and it is calculated that since the establishment of the first saw mill about 2,-500,000,000 feet have been cut. Yet in spite of this great tax upon them we are told that the forest remains, for the most part, in virgin condition, except for a short distance from the banks of the streams and estuaries. It is, of course, too late for regrets, but one cannot help reflecting that the loss of this magnificient region was indeed a serious one to the British Empire.—*Colonies and India.*

BUSINESS CHANGE.

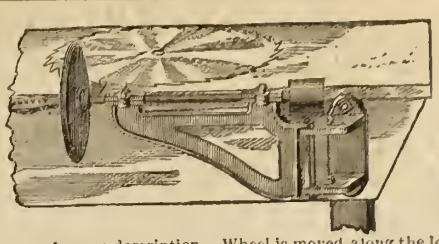
The Oswego *Palladium* has the following announcement in reference to Mr. S. P. Wigg, who has for some time past been managing the lumber business of Messrs. Ross & Co., at Lakefield, Ontario:

Ross & Co., who have done an extensive lumber business in this city for the past ten years, are succeeded by Mr. Wigg, an enterprising business man who understands the lumber trade and will push it to its fullest extent. Mr. Wigg will probably spend most of his time in Oswego. He has purchased the water front in the new harbor and adjoining premises running from Liberty street west to Crane, Belden & Co.'s property for a lumber yard, and will build a pier immediately and have it completed and ready for use by May 1, 1883.

Manitoba Trees.

The principal tree in the Manitoba woods is the poplar, the next in importance is the oak, and near the rivers will be noticed large elms. A very beautiful tree is the ash-leaf maple. Its fresh, green leaves open out in the spring. It is a most vigorous grower, and bears transplanting remarkably well. Were its qualities known it would be valued as an ornamental tree in any northern country. In the spring the ash-leaf maple yields a sweet sap from which excellent sugar can be made, the chief trouble is that at the time the sap flows the flooding of the river makes it difficult to reach the trees. On the shores of the streams which enter the Red River and especially near their mouths, basswood grows in great abundance, and ironwood of a large size can be met with.

It is stated that paper made from strong fibres—as linen—can now be compressed into a substance so hard that it can not be scratched with anything but a diamond. In view of this the *Paper Zeitung* thinks that before loug a great variety of honse furniture will be made of paper instead of wood.



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DEAL FREIGHTS.

The London *Timber Trades Journal* says :—In our last issue we made some mention of freighting prospects for next spring from Canada, and it may not be uninteresting to take a glance at the freights paid during the year now approaching its close.

At the commencement of January vessels were chartered at St. John, N. B., (which port is always open, and from which deals are shipped all the year around), to the British chanuel at 60s. and 60s. 6d., and for the months of February and March 62s. 6d. was also cnrrent rate, thence to west coast of England and to Ireland, but from Halifax, N. S., in March small handy-sized crafts of 250 to 400 tons were chartered at 55s. This extremely low rate from Halifax is accounted for by the fact that all the neighboring deal ports on the Atlantic seaboard of Nova Scotia are closed at this period of the year with ice, and Halifax is the only port where they could get a charter or be loaded, unless they shifted around to St. John, which would be out of the question, on account of extra risk and loss of time. The month of April ushered in lower freights at St. John, commencing at 60s. to the Bristol Channel, then dropping to 55s. to Ireland, and charters were made at 50s. to 53s. 9d. from Nova Scotia.

This fall in deal frieghts was brought about be the numerous steamers which entered the deal trade being unable to get any freights from the United States ports, and it is known that some of the regular Atlantic liners, sailing between Liverpool, New York, and Boston, even paid the owners of grain to be allowed to carry it across to Liverpool ? This extraordinary state of things was owing to the great grain "ring" trying to "rig" the market, and preventing the shipment of it to this side of the water, and the latter was so effectually carried out that both steamers and sailing vessels were to be had so cheaply that one steamer was fixed at 46s. 3d. per standard. When it is borne in mind that it would be preferable for vessels to load grain in the States at 3s. 6d. per quarter to shifting to St. John, N. B., to load deals at 60s. per standard, it will give our readers an idea of the state of things in the month of April. The entrance of steamers for the past two or three years into the deal carrying trade has simply been occasioned by the non-shipment of grain from the States in the spring, caused by the "ring" of grain speculators in Chicago and New York.

Steamers continued to be chartered in the month of May at rates in the neighbourhood of 50s., while sailing vessels obtained 53s. 9d. to 57s. 6d. for Ireland, and 52s. 6d. to the Bristol Channel. As, however, the bulk of the deal chartering for the St. Lawrence, Bathurst, Miramichi, Shediac, Baie Verte, and the Nova Scotian ports is done on this side, charters were effected at 60s. from the St. Lawrence, 62s. 6d. from Bathurst, Miramichi, and Shediac, 60s. from Baie Verte and Nova Scotia, all for first-open-water loading. These rates remained about the same during the summer, but vessels were fixed on the Canadian side somewhat cheaper, The month of July showed freights at St. John 57s. 6d. to 60s., but in August the scarcity of vessels was felt, for rates went up at a bound in St. John to 70s. for Bristol Channel and Liverpool, while 75s. was paid to Ireland, and Nova Scotian shippers paid 67s. 6d. In August freights advanced at St. John to 72s. 6d., while in Nova Scotia 70s. to 72s. 6d. was freely paid, and charterers on this side came to realize that tonnago was scarce, as there was a scramble for ships to remove the autumn deals, and as much as 80s. was offered for vessels from Miramichi, Shediac, Baie Verte, Bathurst, &c., without avail, and the consequence is it is believed large stocks of deals are wintering over. Shippers were able to get a little relief by chartering steamers in Montreal and Quebec at 82s. 6d. to 85s., but not more than about half a dozen were available.

Timber chartering from Quebec was mismanaged by many firms in the fall, who refused ships on this side at 23s. to 24s. and 25s., but had in the end to pay 5s. to 7s. 6d. on the rates they could have got tonnago. The majority of people did not believe in the scarcity of tonnage, and could only be brought to believe in it by paying dearly for their disbelief, or being left without their stocks, and having to pay for the timber wintering on the other side, and remove it in the following spring.

There is no doubt the deal-carrying fleet from Canada is being seriously and continually lessened year by year without a proportion of new ships being built to replace those lost. Shippers live in the hope that steamers will permanently enter the trade and counterbalance the sailing tonnage lost, and no doubt many are fondly building their hopes on a repetition of what took place in the earlier part of this year. However, it is our opinion that charters effected on this side will be at an advance of at least a half-crown on the rates paid at the commencement of last season, and those that charter early will probably charter best.

BARREL MAKING.

The Ottawa *Free Press* says :—The invention of a machine that would manufacturc flour barrels equal to the hand-made article, has long been a subject over which more than one ingenious mechanic has cudgeled his brains. The old machine-made barrel without the bulge, which was turned out at Harriston, was an outcome of this desire and the best that had been achieved until about two years since, when Mr. Wright, a former foreman for Mr. Wm. Bell & Co., and who left that position to enter the employ of the Guelph Barrel Company at Harriston invented something better. His invention is altogether distinct from any machine which has ever been turned out for the purpose before. While the straight barrel was made in the one piece of veneer, very much after the style of cheese-boxes, Mr. Wright's machine turns out a regular stave barrel, which does not differ from the hand-made article, except that all are of uniform shape and perhaps more neatly finished than it would pay coopers to make them as a rule.

When it was seen that thore was something in tho invention, a number of Guelph gentlemen were induced to form what is now known as the Guelph Wright Patent Barrel Machino Co., for the purpose of manufacturing the machine. It has been a most expensive venture. Ever since the formation of the company they had a hard fight in court, both in England and in this country, with parties who had got hold of the idea and improved it. Now, fortunately litigation has ceased and the Guelph Barrel Machine Co. are the undisputed possessors of the invention, with patents for it in almost every country in Europe besides the United States and Canada. While they are having the machines manufactured at Galt by Messrs. Cant, Laidlaw & Co., the patentee is home in England, where he has succeeded in making further improvements, which may be attached to the present machine and will make the manufacture of barrels a more rapid process even than it is by the invention as it stands.

On Friday afternoon some gentlemen paid a visit to Dr. Cowan's cooper shop, in the rear of McConnell's carriage works, Eramosa Bridge, to see one of the new machiues at work. Although several barrels were set up in one minute's time, it was evident that the process would have been more speedily accomplished with stronger power. The gentlemen expressed astonishment with the invention and satisfaction with its work.

The simplicity of the machine cannot but give rise to wonder that it was never invented before. The staves are fed by hand on to a barrel-shaped revolving cyliuder made of four longitudinal iron sections. Two arms surround this cylinder at either end of it, and contract the ends of the barrel, while a small circular saw and revolving knife at either end cut off the staves to the exact length, and form the bevel and niche for the end pieces. Two hoops are then placed on, after which the moving of a lever causes the four sections of the cylinder to fall in, and the barrel is taken off set up. In the words of a cooper, the work of the machine is to "set the barrel up, cut the croze and champher the chime."

What effect will this machine have on the coopering trade? is a question naturally asked. Those engaged in it apprehend a complete revolution in barrel making and consequently have no praises to offer the invention. This can be understood when it is stated that one machine is capable of turning out from five to six hundred barrels per day, and at an estimatcd saving of 4c. on each barrel, as compared with the cost of making them by hand. Already the company has received quite a number of orders in Canada for machines from such millers as Mr. J. Goldie, and some of the smaller millers who have used the barrels speak of them in high terms. There is not the slightest doubt but the machine will come into general use and the result will be to amalgamate and centralize small coopering businesses, and to throw a large number of the mechanics engaged in that trade out of work. The company have a good thing, and if they word it properly should reap a fortune from it without much difficulty.

THE SUNK LANDS OF ARKANSAS.

KENNETT, Mo., Dec. 10.—The Sunk Lands, in southeastern Missouri, and northeastern Arkansas, are a sort of *terra incognita*. The country was formerly as beautiful and fertile a plot of land as any on the globe. Rolling prairies were shaded by heavy forests and traversed by two beautiful streams, the Little and St. Francois Rivers. The rivers still exist, but the general face of the country was marvellously changed by the great earthquake of 1811-12. These streams, instead of meandering through rolling prairies and primeval forests, now keep their tortuous courses by a chain of lakes and swamps of cypress and tupelo gum, draped artistically with elk vine and grey moss. It is a paradise of lowland scenery, from which millions of photographic views might be taken, leaving millions more of equal beauty untouched.

The Sunk Lands proper are 120 miles long and average 60 miles wide. They are diversified with beautiful lakes, rolling prairies, and dense forests. The lakes coutain much open water, and vary in depth from five to thirty feet. Some are covered with forests of cypress and tupelo gum festooned with moss and vines. While canoeing your way over these weird timber-grown lakes long vistas 'neath overarching trees and vines open up to view, and in the dim distance, seemingly miles away, so marvellous is the prespective, the waters of some open lake are tremulous with sunbeams.

Theso timbered lakes are a favorite resort for trappers and hunters. They annually capture thousands of dollars' worth of furs. Otters, beavers, raccoons, opossums, and muskrats are trapped by the hundreds. Fine game fish are also caught here.

The land is unusually fertile. Large farms under cultivation yield immense crops of corn, cotton, wheat, rye, oats, sorghum, potatoes, and other vegetables ; yet to a stranger the country seems like an unbroken forest. The timber includes the most valuable timber known to commerce, black walnut, ash, whith oak of the finest shipbuilding quality, post oak, cherry, maple, hickory, hackberry, cypress, catalpa, and sassafras. There is another species used for local building purposes, which, if it ever reaches a fair market value, will prove a source of great wealth. I mean the red gum. It is susceptible of a higher polish than black walnut. It will not split, and, when properly seasoned and dressed, makes beautiful boards, having much the appearance of cedar, or of the redwood of California. In all requirements save durability it fills the bill exactly for railroad cross-ties. A driven nail will not draw from this wood. When a process is discovered which will render it durable under exposuro of the weather it will be an invaluable wood.

The agricultural possibilities of these Sunk Lands are great. Before the war it was thought impracticable to grow cotton so far north. Now the average yield is about 1,500 pounds seed cotton, equal to three-quarters of a bale lint cotton, to the acre. This county raised and shipped last year in round numbers 15,000 bales of cotton, although lying in latitude 36° north. Hay is also a great product. Everything grows luxuriantly. The peculiar formation of the land renders it dry, and yet perfectly invulnerable to the ravages of the most continued drought. During the driest season of the year is not more than from six to eight feet down to the level of the surrounding lakes. The land is a rich sandy loam, highly porous. The moisture rises to the surface, Every morning the ground is moist and fresh, notwithstanding that on the day previous it may have been parched seemingly almost to a cinder by the burning sun and dry winds.

THE TORONTO OUTLOOK.

"Instead of anticipating any reaction in the lumber trade during the coming season," said a prominent lumberman to an *Evening Canadian* reporter this morning, "I predict a continuance of the boom that has struck our business. There is no sign of any diminution in the almost unlimited demand for stuff. Every one of my five mills is being heavily stocked, and I expect to turn out a quantity far in exess of that o any year yet since I began operations."

"What sort of a season has it been for the woods so far?" was asked. "Couldn't have been better," was the reply. "There has not been a superabundance of snow, or an excess of cold, and work at the shanties has gone on famously."

"How about prices?" the reporter enquired.

"Well," responded the lumberman, "I don't think they are going to advance much, if anything at all. It's just like this. At the opening of the season shantymen's wages went up, for they were in demand, and, knowing it stuck out for big pay. This, of course, put jobbers who had taken large contracts at a disadvantage. But then, on the other hand, mill men know that it is not a safe proceeding to let out a limit to be cleared at too low a rate, for the jobber knowing he will not get full rates for any but the best logs, will leave many a inferior one in the woods as not being worth his while to handle, notwithstanding that it would be worth the while of the mill man to handle it. So, you see, in the end a close contract does not always yield the best results to the lumberman, and most of us recognize this and govern ourselves accordingly. The output of all kinds of timber will be very large, and while the demand, as I have said, will not abate, the market will be in such a condition as to keep prices at a normal level."

"So the N. P. hasn't ruined the lumber trade yet?" queried the reporter, as he rose to depart.

"No, sir?" exclaimed the dealer, vehemently, "nor any other industry I know of. Newspapers and persons who go on berating the National Policy either do so from pure and simple factiousness, or else they are fools. And I'm no politician either, understand me!"—*Toronto Canadian.*

Stocks in London.

The London dock deliveries do not shake the adverse balance between this year and last ; there are still over 12,000 standards in arrear. The deliveries in 1881, however, surpassed those of the larger import of the previous year by 26,287 standards, though they fell off considerably towards the end of the year. In our impression of the 17th of December, 1881, the deficiency of the deliveries for the previous week as compared with 1880, was no less than 1,300 standards sawn and planed wood and 500 loads of square timber.—*Timber Trades Journal.*

A NEW paper and pulp mill has just commenced operations at Eau Claire, Wis., and the *News* of that place says it turns out print paper of excellent quality.

Just at the Wrong Time.

Mr. Robert Wilson, of the City Surveyor's office, and Street Commissioner of the Eastern Division for the Board of Public Works, Toronto, Ont., who is very fond of shooting, says : "To lose a duck hunt is a loss for which there is no adequate recompense. This misfortune lately overtook me. The boys got together recently and made arrangements for a good hunt. At the time the arrangements were entered into I was in good health generally ; but, just as the shooting was to take place, my old enemy, the rheumatism, came back to stay with me awhile again, and I had to forego the pleasure. The rheumatism has been a source of great bother to me, and I have done a great deal of doctoring for it, without much good. When this last attack came on me and crippled my hands so that they were drawn up, a friend of mine recommended St. Jacobs Oil, the Great German Remedy. I tried it, I am happy to say, and the result is that I am now cured and as well as ever. St. Jacobs Oil succeeded where more than a score of other liniments and medicines had failed."

Chips.

THE shipments of deals from Montreal during the past season, exceeded 44,000,000 feet, an increase of 190 per cent over 1881.

NINETY-THREE thousand acres have been planted under the new arboriculture act in Kansas. Proference is given to the cotton tree because of its rapid growth.

THE German empire has now about 34,000,000 acres of forest, valued at $400,000,000, and appropriates $500,000 every year to increase and maintain the growth of trees.

THE Ottawa *Free Press* says :—Messrs. McCracken & Boyle, lumbermen, are at present sending up a number of teams to their shanties in the Desert for the purpose of log-drawing.

THE Parry Sound *North Star* says :—The Midland & North Shore Lumber Co., are building a fine new iron burner at their mill. They are also overhauling the machinery and putting in some additional.

A STOCK of 250,000,000 feet of logs is calculated on for the supply of the Oscoda mills next season. Men were scarce and hauling did not commence until late, while cutting and skidding was also retarded in consequence.

THE red or sweet bay is an ornamental wood, which is practically inexhaustible in Florida. It is substantially the same as mahogany, and can be used in the same way, and for the same purpose, as the Honduras mahogany.

TWO hundred thousand dollars have been refused for 95,000,000 feet of standing pine in Bayfield and Douglas counties, Wisconsin. The land is owned by Reuben Whiteman, of Dansville, N. Y., and was bought in 1880 for about $50,000.

WILD cherry is a wood for which a large demand is springing up, which must inevitably make it very valuable in the future. It is used principally to supply the place of walnut. It is extremely close grained and can be very highly polished.

THE extraordinary durability of cedar is exemplified just at present in the removal of some timbers of that wood by the Canadian Pacific railway company, which were imbedded some seven feet in a bank over 80 years ago, and they are quite sound yet.

A CORRESPONDENT informs the London *Timber Trades Journal* of several somewhat important contracts for American joinery having been entered into for next season, and says that some shipments will be sent to Liverpool of an altogether novel character.

THE *Lumberman's Gazette* says :—There are on hand in Minneapolis, Minn., 100,000,000 feet of lumber, a stock not large enough to scare the dealers, for the booming northwestern trade ought to call for a good share of it before the next sawing season opens.

THE *Northwestern Lumberman* says :—A good depth of snow in northern Maine and the provincial borders encourages logging in an important section, for the operators go on the British side to get out logs, bringing them to American ground to saw them, and thus escape the Canadian duty.

THE *Timber Trades Journal* says :—It is most desirable that some better use should be found for the waste wood and sawdust so plentifully turned out at the large sawing and planing mills. We shall be happy to publish any reasonable suggestions, and invite correspondence on the subject.

THE *Timber Trades Journal* says :—It would be interesting to be made acquainted with the cause of the rapid decay of Miramichi and other similar pine deals when piled away in yard. Why Miramichi deals should be more prone to decay than Quebec deals we are unable to say, yet such is every often the case.

THE *Lumberman's Gazette* says :—When hardwood stumpage sells at the rate of $1 per cord, as lately reported at Duluth, the growing importance of that class of timber may be realized. There is still a mine of wealth undeveloped in the forests of Michigan, and as we stated a few weeks since, some of our pine lumbermen will soon begin to realize the vast source of wealth they have allowed to slip through their fingers in the lands which have reverted to the state after they have denuded the same of pine.

THE *Timber Trades Journal* says ;—The long continued wet weather is reported to have had a most damaging effect upon the appearance of the new deal piles. Much of the wood imported during the last two months is said to appear as weathered as that imported last season. Several cargoes of boards, which endured the last heavy rainfall whilst on quay, have been much damaged.

THE attention of western furniture manufacturers is being turned to the hardwood of the south as the source of future supply. It is rather vaguely stated, though probably true, that a western firm has sent an agent to the Piedmont region, western North Carolina, with instructions to purchase 100,000 acres of timber land, and others are taking similar measures to insure a supply.

THE Winnipeg *Sun* in an article on the Canada Pacific Railway says :—The cost of lumber consumed by the road was over ten millions of dollars. Sixteen million feet of this lumber were brought from Minneapolis, and it cost in Minneapolis $300,000, whith together with the duty and freight would make it cost over $550,000. Six million feet of lumber were brought from Keewatin. This cost at the rate of $25 per thousand feet.

THE Chicago *Lumber Trade Journal* says :—At the price list meeting of the Lumberman's Exchange, December 27, only one change was made. On 2x6, 12, 14 and 16 feet, $1 was taken off, and each member was privileged to make any special discount he saw fit on grades that he had a surplus of. The price list as sent out was practically endorsed as a farce. It will not strike any one as news, as nobody has thought of buying and selling on the list for some months.

THE London *Timber Trades Journal* says :—Little is now heard of the cheap English made doors, for the sale of which a few years ago there was intense competition. British makers have either discovered that the manufacturing of them did not pay at the low prices which were obtainable, or the signal cessation of speculative building has stopped the demand which once so largely existed. A very large business is still being done by the English joinery mills, but we understand that a superior class of joinery work is being made, and that many mills are manufacturing mostly from architects' drawiugs.

The New York *Times* says :—To enable the lumbermen to obtain a higher price for woods which they are rapidly exhausting, we tax imported woods, which in eight years will be our sole dependence, for one of the most important necessary articles in use. This is protection run mad. It is one of many instances in which Congress under the pretence of protecting American labor, imposes a tax on the livelihood of American laborers. Nothing can be plainer than that, instead of compelling our people, by an import duty on foreigh lumber, to use more of our limited and fast disappearing supply, we should admit such lumber free of duty.

THE decay of wood imbedded in the earth is difficult to guard against, but, according to the British Farmers' *Gazette*, a simple precaution costing neither money nor labor, will increase the durability of posts put in the ground by 50 per cent. This is simply by taking care that the wood is inverted, i. e., placed in the opposite direction to that in which the wood grew. Experiments have proved that oak posts put in the ground in the same position in which they grew, top upward, were rotten in 12 years, while their neighbors, cut from the same tree and placed top downward in the soil, showed no signs of decay for several years afterward.

THE *Timber Trades Journal* says :—Merchants at Gloucester are fairly stocked with spruce, and we believe one of the Canadian houses has a couple of cargoes yarded on Mr. Booth's ground, sooner than accept present low prices. The east coast houses have been competing keenly with the Gloucester merchants in the midland districts with Baltic whitewood, but now that spruce has come down again this state of things will cease. Cardiff houses have been importing spruce to Gloucester the last couple of months, which would not tend to improve the position of the trade here, but the buyers in the country would gain by this move of the Cardiff people. On the whole, we hear trade has been good, with fair consumption.

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Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

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Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes for

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MONTREAL.

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Represents **No. 5 20-Horse Power** FIRE-PROOF **CHAMPION** SAWMILL **ENGINE** WITH **SECTIONAL SAFETY BOILER.**

Build 4 Sizes Fire-Proof Champion Engines

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12 H. P.
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WITH PLAIN OR SECTIONAL BOILER if so ordered. *We are testing an Engine every day.* Intending purchasers *are invited* to call at our Works and thoroughly examine the Champion. We use **KRUPP'S CELEBRATED BOILER PLATE,** Every plate tested. Every boiler tested to 160 pounds, cold water pressure.

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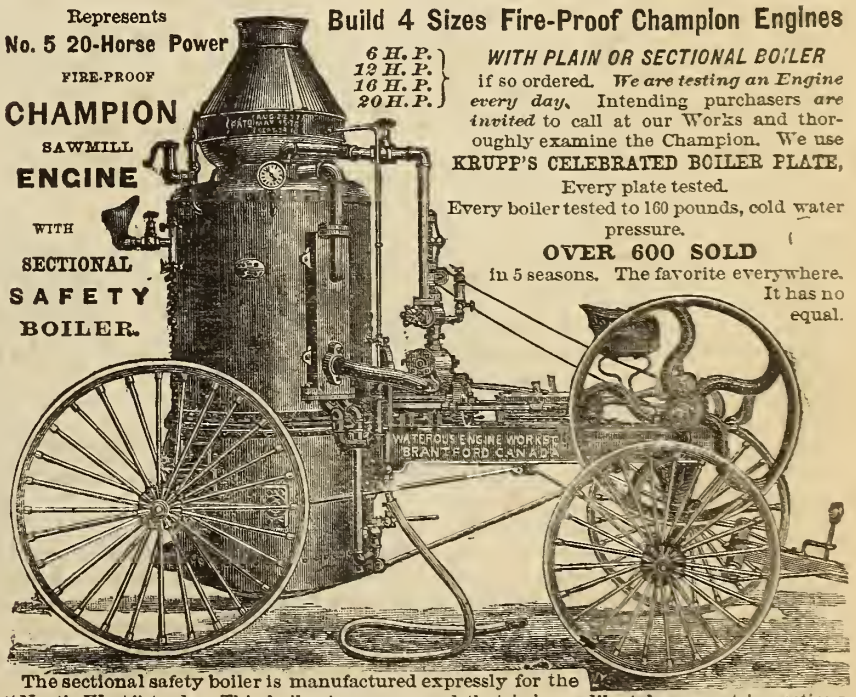

The sectional safety boiler is manufactured expressly for the "North West" trade. This boiler is so arranged that it is readily taken apart in sections enabling purchasers to clean thoroughly every part of it and prevent burning out. *We know from experience this is absolutely necessary with the alkaline waters of the great Western prairies.* Largely used by the Pacific Railway Company and all the large Colonization and Ranche Companies.

ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

Send for New Circular.

Market Reports.

MONTREAL.

From Our Own Correspondent.

JAN. 10.—For the past two weeks up to Saturday last there have been so many holidays that business in the lumber trade has been quite at a standstill, but now that the holiday season is over,'some little improvement has been experienced in business during the past two days, and a good steady winter trade is now expected. There is some demand from Boston for ash lumber and several shipments have been made to that city. Hardwood is making in the townships for which they have had a favorable winter so far, and stocks are expected to be full next season. Prices of all kinds of lumber in our market are steady and very firm as under. We quote prices in the yards :—

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

The severe cold weather during the past ten days or so, has caused quite a brisk demand for wood. Imports continue to be very limited, and there is very little stock in the city as compard with previous years, and as a consequence prices are high and likely to remain so till the opening of navigation. We quote ex cartage at the depot :—

Long Maple	$7 50
Short "	7 00
Long Birch	7 00
Short "	6 50
Long Beech	6 50
Short "	6 00
Long Tamarack	6 50
Short "	5 00

TORONTO.

From Our Own Correspondent.

JAN. 10.—The close of theholiday season has given retail dealers a fresh start, and the yards are nearly all in full blast again, some with whom I have conversed state that they are as full with orders as during the summer months; let that be as it may it is evident that there is little cause for complaint on the score of dull trade at the time of writing this letter. I for one had entertained the idea that we had already sufficient, and to spare, of empty houses, but some people seem to think otherwise, and so it goes on, and our fair city continues to extend her boundaries, and the outlook for the coming season is conceded by all who have the opportunity of judging to be excellent. Some large factories are now in the course of erection and other important manufacturers are on the lookout for suitable sites on which to erect large buildings. It is by this means that our city may look forward confidently to a large increase in population during the next decade.

Another retail lumber firm has opened up at the west end of the city whose shingle reads T. & S. Baldwin, both trustworthy young men, and if industry can build up a flourishing business they are sure to succeed. With the opening of the new year there have been some important changes in the personal of well-known firms doing business here. One member of the firm of Donogh, McCool & Oliver, wholesale lumber dealers, has retired, and the business is now continued by the first and last named, and doutless the remaining members of this firm are fully able to hold their own in the race for success. Another extensive building firm, that of Mr. Geo. Gall, has made the welcome addition of Mr. J. McCraken, formerly senior member of the firm of McCraken & Oliver, lumber dealers, and I believe it is their intention to combine the lumber trade with that of building and factory work in general, and both members of this firm being men of long experience and sound judgment combined with business tact and ample means they can hardly fail in building up a largely increasing business.

Prices at the yards remain firm at last quotations, and no surplus of stocks on hand beyond present or immediate prospective requirements.

QUOTATIONS, FROM YARDS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	20 50
" " " 32 ft	22 00
" " " 34 ft	24 00
" " " 36 ft	25 50
" " " 38 ft	27 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	16 00
1 " " dressed	23 00
1 " " undressed	17 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 00
Sawn Lath	2 50

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$57 00@64 00
Pine, fourths	57 00@59 00
Pine, selects	52 00@54 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25
Lath, pine, "	0 00@ 2 50

BOSTON.

Cotton Wool and Iron of Jan 6, says:—The tone of tho market is steady, and everything seems to be in a healthy situation, with a good prospect as to future trado. At the same time, the volume of bnsiness is limited just now to the supply of current wants, as parties are hardly ready yet to start out in mauy operations for the new year.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

CHICAGO.

The *Northwestern Lumberman* of Dec. 30, says: Reports this week from nearly all points west of the lakes indicate an extremely moderate trade. At some points there is scarcely anything being done. The large stocks on hand in all the leading market have made holders anxious to sell, and willing to do so at liberal concessions in price. This, together with the demoralization of freight rates, has led yard men thoughout the Northwest to stock up, and now it is generally the opinion that the country demand for the present is met. At the East the conditions are somewhat different, though assortments at New York and in the New England cities are quite full—not to that degree, however, that will carry the yards many weeks, under a good export and local demand, without some replenishment by rail. The wholesale yards at Albany have been made ready for such a demand, and the dealers will wait with gentle anxiety to see it come. Some descriptions of white pine, it is thought, will advance at New York, but there is no prospect of an immediate change in prices, though it is expected that they will hold firm. Yellow pine on the seaboard is still a drug. Spruce is in ample supply. Lath is quiet at firm prices, ranging from $2.40 to $2.50, and shingles are more active.

The stock on hand at Oswego is 216,000,000, as against 166,000,000 last year, and it has not appreciably decreased since the close of navigation. At Buffalo and Tonawanda, while the supply is larger than it was last year at this time, business is considered fair and prospects good.

Receipts, and stock on hand, of lumber, shingles, etc., for the week ending December 28, as reported by the Lumberman's Exchange :

	RECEIPTS. Lumber.	Shingles.
1882	3,011,000	839,000
1881	4,438,000	1,920,000

FROM JANUARY 1 TO DECEMBER 28 INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1882	2,038,935,000	894,538,000
1881	1,869,543,000	836,916,000
Inc	169,392,000	57,622,000

STOCK ON HAND DEC. 1.

	1882.	1881.	1880.
Lumber	719,458,412	620,781,223	569,879,283
Shingles	309,932,650	265,262,174	200,039,000
Lath	76,994,869	53,017,573	59,186,000
Pickets	3,976,929	2,346,682	2,706,303
Cedar posts	100,258	241,138	47,726

OSWEGO, N. Y.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	1 90@ 2 25

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of Dec. 23, says: Even at tho Baltic this week things were dull. Certainly Messrs. Churchill & Sim did not offer a very large assortment of unreserved goods in their catalogue, which partly accounts for the attendance being hardly up to the average. No doubt it was best not to put any heavy parcels on the market at this dull time, and when the year has turned we shall probably have unreserved goods plentiful enough as of yore. If the saleroom itself was not crowded, however, the avenues leading to it were thronged with all the leading men of the trade, and doubtless being the last sale of the old year a great many were there out of curiosity to hear how things went. There were several of the reserved lots disposed of, amongst which a couple of lots of Montreal 1st bright pine regulars met with a buyer at £23 5s. per Petersburg standard, also a lot of Gromoff's 1st white Petersburg plank was knocked down at £11 5s., by no meaus a bad figure, taking into consideration the proximity of the holidays and the natural disinclitation of the trade just now to add to their stocks; still there was plenty of room for improvemeut ou the prices realized.

LIVERPOOL.

The *Timber Trades Journal* of Dec. 23, says: The imports during the past week have been composed chiefly of cargoes of spruce deals, and these goods now seem to come forward in quantities never anticipated even by those who are inclined to hold on to the old idea that they appear "to drop from the clouds."

With the near approach of Christmas holidays, there is naturally a very marked indisposition to do business, and any transactions entered into now will be confined either to retail transactions wherein the buyers require something for immediate delivery, or for delivery when the incoming year is advanced. The general tone of the market is therefore dull, as usual at this time of the year, and few important transactions have taken place recently, as buyers are not inclined to buy any cargoes, unless at a very low figure; and, on the other hand, sellers are not pressing their cargoes upon the market, hoping the new year will bring in brighter prospects. The general depressed tone of the market has been intensified in a degree by the suspension of the firm of Messrs. Davies, Williams & Co., timber merchants, of this city, with liabilities roughly stated at about £20,000, but nothing is as yet known of the probable amount of assets. The list of creditors is understood to include several foreign houses, who are represented directly or by their agents.

On Wednesday Messrs. Alfred Dobell & Co. sold by auction the cargo ex Guldfaxe from Oak Bay, Nova Scotia, without reserve, on account of the Bank of Nova Scotia, at which the following prices were obtained :—

Spruce deals—		£ s. d.		£ s. d.
16 ft. and upwards	3×11	8 0 0		
12 to 15 ft.	3×11	7 10 0	to	7 12 6
9 " 11 "	3×11	7 10 0		
16 " and upwards	3×9	7 10 0		
12 to 15 ft.	3×9	7 7 6	"	7 10 9
9 " 21 "	3×9	7 2 6		
16 ft. & upwards	3×7	7 0 0	"	7 1 3
12 to 15 ft.	3×7	7 0 0		
9 " 11 "	3×7	7 0 0		
16 ft. & upwards	2½×7	7 7 6		
9 to 15 ft.	2½×7	7 12 6		
9 " 26 "	3×12 to 17	7 2 6		
Deal ends		6 5 0		

TYNE.

The *Timber Trades Journal* of Dec. 23, says: The near approach of the Christmas holidays combined with the stormy weather experienced during the last few days have effectually put a stop to all appearance of business, and there has been therefore literally nothing doing during the last seven days. A few ships have dropped in from a late and stormy passage, amongst which are two Quebec vessels with the usual assorted cargoes. One of the Gothenburg steamers has also arrived, but the deliveries are of the most meagre character.

GLASGOW.

The *Timber Trades Journal* of Dec. 23, says: The additions to Clyde stocks of wood since last writing have been unimportant, and at this time of the year the quantity of goods changing hands is of course very limited. As indicated in last week's note, there is a comparatively fair supply of wood on hand at present in the various depots for storage of timber with which this market is in immediate connection. Yorkhill yards, where the great bulk of the deals (Cauadian and lower port) imported to Clyde are stored, have just now a well stocked appearance, although deliveries have been going on recently to a fair extent, the amount for November being 71,532 pieces, and since the beginning of December 35,719.

Most of the deals landed here have been per steamer, a small proportion only coming per sailing vessels. Of Canadian deals this year's import shows a considerable increase over 1881, while there is a large falling off this year compared with last in the number of Lower Port deals imported. Altogether the American deals imported to Clyde this year to date amouut to 1,233,000 pieces, as compared with 1,315,500 pieces last year.

ST. JOHN, N. B., SHIPPING.

The *Telegraph* says:—We publish to-day a statement of the new vessels added to the registry books of this port during the year 1882; of the old vessels transferred to St. John from other ports duriug the year and of the vessels written off our books, whether in consequence of being wrecked, broken up or transferred to other ports. The last named list is a very formidable one, comprising ninety vessels and including some of our finest ships. The new tonnage added during the year amounted to 13,049 tons; tonnage to the amount of 2,736 was transferred from other ports, making a total of 15,-

785 tons added during the year. This margin, under ordinary circumstances, should have left our tonnage at the end of 1882 fully up to the standard of 1881, but our losses were enormous, no less than 40,873 tons of shipping being written off the books of St. John during the year. Tne result is that the port of St. John, which this time last year had 270,186 tons of shipping on its books, has now but 245,118 tons, a lower figure than we have reached since 1871. This is partly due to the transfer to Liverpool of upwards of 20,000 of St. John shipping, including the whole Moran fleet, which, since the death of Mr. James H. Moran, has been registered in the name of his brother in Liverpool. It is mainly due to the difficulty of building wooden tonnage witb profit, tbe increased cost of building being an element in producing this result.

The following statement shows the tonnage of tbis port at the end of each year since 1870, inclusive :—

1870	214,814
1871	226,727
1872	246,485
1873	247,227
1874	263,410
1875	270,762
1876	280,073
1877	279,616
1878	276,016
1879	281,178
1880	275,897
1881	270,186
1882	245,118

BAND SAWS VS. CIRCULAR SAWS.

The question of the disadvantages of the circular saw over the band saw bas recently engaged tbe attention of tbe German industrial journals. The objections urged to the circular saw are, that it is very dangerous to the workmen ; requires greater power to drive it than any other kind ; makes a much wider cut, producing more waste and yielding less product from a given amount of material. The only advantage allowed by tbese papers to the circular saw is that it costs less than tbe band saw. The Mechanics' Association of Muehlhausen in its yearly report, advises that the circular saw be abolished wherever it is practically possible to do so, and in Germany this is possible in a great majority of cases.

This action towards tbe circular saw on the part of German mill men is perfectly practicable, and, indeed, a wise measure, in view of the scarcity of timber in that country, and tbe necessity of economizing its manufacture in every possible way. The band saw certainly possesses great advantages over the circular saw in the saving of raw material, this saving, in the opinion of persons who have used the band saw, amounting to fully twenty per cent. In fine woods, such as walnut, cherry, maple, ash, etc., this is an item worth looking after by our mill men, and it is well worth tbeir while to consider wbether tbe adoption of tbe band saw for cutting such woods would not be a profitable investment. For the rapid cutting of the coarser and more plentiful timbers, as oak, pine and poplar, the circular saw, of course, will continue to be used, as, witb our people, for a long time to come, rapid work, ratber than economy of material, will be the great object in lumber manufacturing.—*Southern Lumberman.*

The Forests of Grand Isle, Vt.

The region of Grand Isle, Vt., is said to have suffered a depletion of half its forest timber in the past 30 years. Hundreds of acres of land have been cleared entirely of heavy timber and reduced to tillage or pasture, and the forests now standing have been thinned out and culled extensively. It is claimed there is hardly a farm that could replace its cedar fence from its own forests, and scarcely one with sufficient to rebuild its dwelling and out-buildings, while on many farms there is no timber for fuel. Little or no timber planting has been done. The island was at one time famous for its magnificient oaks, the stumps of many grand trunks still standing, and there is hardly a pine tree fit for a spar. Every farm once had a sugar orchard, and now there are hardly any that can be worked. In fact, the oak, pine hemlock, tamarack, cedar, and maple are practically exhausted, though at first blush it might seem that the forests were quite extensive. The few groves of second-growth cedar are being largely utilized for hop poles, which bring, standing, 2 or 3 cents each, but if left to grow about 20 years or so they would be worth about $1 each for posts, telegraph poles, or ship knees.—*Northwestern Lumberman.*

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GAS METERS AS HELPS TO FIRES.

In most buildings designed for multiple tenancy, like great apartment houses and the capacious office buildings which comprise so large a part of the business part of a city, it is customary to provide a separate gas meter for each room or suite of rooms. These meters are commonly placed in closets and out of the way corners, and are very apt to be surrounded with much combustible matter. The connections of meters with the gas pipes are usually, if not always, of lead, a metal that is easily fusihle, and the solder with which the plates of the meter are joined together yields even more readily to heat. Let a fire break out in a building containing, as many huildings do, a score or more of these fragile fire feeders, and the hot air sweeping in advance of the fire will quickly melt the lead or solder. The outpouring gas fills the building with an explosive atmosphere which hastens the spread of the flames and keeps up an inexbaustible supply of fuel. Such burning as gas jets, sometimes of great size, are to be seen after almost every city fire, when nothing is left of a building but blackened and broken walls. The gas poured into burning buildings through such openings douhtless helps materially to account for the surprising suddenness with which many buildings have been swept hy flames, and in all cases the outflow of gas must seriously counteract, if it does not altogether thwart, the efforts of the firemen. The remedy for this great evil is not so easy to point out. It is obvious that where a multitude of meters are to he distrihuted through a building they should be more securely incased and provided with infusihle connections, or some means should be devised whereby the gas supply shall be automatically shut off whenever the temperature rises so as to imperil the integrity of the meter. There should also be near the outer door and readily accessible to firemen, some means by which the connection of the house with the gas main in the street can be quickly closed. There is clearly an opportunity here for useful and profitable invention.

WOOD PULP.

The *Lumberman's Gazette* says :—One of the astonishing results of the wood-pulping and paper-making processes, lately introduced, is the conversion of the whole of a sapling pine into paper, without any waste. In Massachusetts, and others of the New England states, there are large growths of these pines, which are too small for box boards, and which will not pay for the cutting, in most localities, when used for firewood. These will average some six or eight inches at the butt, are smooth, and when growing in clusters are quite tall. The limbs project in joints around the tree, leaving a space between them of from 12 to 24 inches of perfect stock. These trees are now cut for paper stock, and trunks, limbs, bark and the needle-like leaves are all worked up by mechanical and chemical processes into roofing and other paper and paste board. It is said that the saving of the limbs and the bark of the tree now pays for the whole cost of the wood.

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Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

THE carpenters of the Northern Pacific railroad are building woodsheds in Idaho in order to have sufficient dry wood for the locomotives. The shed at Sand Point is 200 feet long by 75 feet wide and those at Camp Hope, Cabinet, Gravel Pitt 3, Rock Island, Trout and Beaver creeks are 30 by 150 feet. The wood to fill these sheds is already out.

THE Aztecs, before the conquest of Mexico by the Spaniards, recognized the value of trees to a country for the maintenance of moisture and the promotion of irrigation. Prescott, in his history, tel's us that their law contained seven penalties against the destruction of the woods, which they deemed necessary to secure the means of maintaining irrigating canals.

THE Buffalo *Lumber World* says :—From the logging camps tbe news is generally favourable. In some sections an extra good start was secured, and everywhere the beginning was satisfactory. The soft spell of the week before December rather discouraged some, but since that time it has become much colder again and work is progressing rapidly. The profitable condition of lumber manufacturing during the last season encourages the belief that a very large supply of logs will be banked—perhaps larger than ever before, if conditions continue favourable.

Lumber Sale.

Mr. J. M. Irwin's auction sale of lumber at Nassau Mills on Wednesday was very successful, the large quantity offered being readily purchased at satisfactory prices. The competition was keen, there being several buyers from a distance, besides our local builders and farmers, so the auctioneer Mr. C. Stapleton, was kep busy with the bids.

THE *Timber Trades Journal* says :—The Germans appear determined that we shall not be helped by them to ruin our forests. A proposition has been laid before the German Senate to increase the duty on imported unmanufactured wood from 10 to 30 pfnnige per 100 kilogram, and from 15 to 25 pfennige for sawn wood !

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestable food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

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TIMBER CLAIM LAW.

An Iowa correspondent wrote to the Chicago *Lumber Trade Journal* as follows:—I think few of us realize the benefit of this law. Those who settled far out in our prairies twenty to forty years ago, when there was no trees for miles around to break the bleak winds, can now since trees have been planted and grown twenty to forty feet high, realize their benefit in breaking the wind, Far more will the settlers of the broader treeless countries to the west and north west be benefitted by the Timber Claim Law, which will induce so general and extensive planting of timber. Whether forests do or do not induce rain I will not here stop to argue, but it certain that when the wind is checked the dews fall more and last longer in the morning; the evaporation of moisture from the soil is less; the wind does not dry up, injure and break down the field crops; nor does the winter wind so terribly pierce both man and beast when trees planted as when the long reaching winds meet with no barrier to check them.

Wood and timber is a proper and valuable product of the farm, and the young beginner on the farm will find, if he plants valuable and fast growing varieties, the grove will be the most valuable investment on his farm.

Winter and spring is too late to gather the seed and nuts of most of our forest trees, but the cuttings of cottonwood and willow should be taken off very early, before the sap begins to circulate, and stored where they will keep slightly moist. I do not recommend these trees as being valuable, except for quick growth and easy to be had for next spring.

The nurserymen have large quantities of walnut, maple, ash, hardy catalpa, etc., which may be had by applying before their stocks are all sold, but the demand is very great, mostly sold out last fall. The catalpa has been raised by the million and sold for planting in Kansas, Nebraska, Iowa, and some in Dakota and Minnesota; but its success north of Iowa is yet in doubt. I would recommend its trial in the middle of groves of other trees, with deep planting on dry land. Wherever it can be raised it will certainly be the most valuable tree for the farmer.

When Congress passed the Timber Claim Law it was a wise provision and a great incentive for the settlement of new territories. They will soon become new states, and changed in a wonderful short time into comfortable homes with prosperous farmers.

JOINERY FOR ENGLAND.

The *Timber Trades Journal* says:—We have further information to hand respecting the coming importation of prepared American joinery, or more correctly termed "finished wood-work." Great efforts, it is said, will be made next season to establish "American finished wood-work," as a saleable item in the English markets.

The same journal also says:—Messrs. Ekman of Stockholm, the firm from which Messrs. H. Atkinson & Co., of Wharf Road, London, receive their supplies of Swedish joinery, are, we understand, in order to meet an increasing demand for their doors and other goods, about to make considerable additions to their mills. This firm were the pioneers of the Swedish joinery trade in this market, and the uniform excellence and reliability of their goods are too well known to our readers to need any further commendation from us.

RENDERING WOOD INCOMBUSTIBLE.

Accounts are published in the English scientific journals of some recent tests of asbestos mixtures for rendering wood, canvas and other materials incombustible, and it would seem, with encouraging results. Among other experiments, a piece of light pine wood, about six inches long by four inches square, painted with five coats of this substance, was placed for upwards of half an hour in an ordinary grate fire, but, although the wood within was reduced to charcoal, there was no blaze whatever emitted during the charring. Again, a small model theatre, built of wood, with net scenes and accessories, was sprinkled with turpentine and set on fire, every portion ignited, and the whole was consumed; but a similar model with the net scenes and the wood frame all painted with abestos, was drenched with turpentine and set fire to, but the scenes were only partially charred at the lower ends, with the turpentine flames, while the timbering was not even ignited. Tests were also made with two models of a larger size, about four feet cube built on a bed plate of one inch real board, and set fire to by a bundle of shavings, the one was burned and the bed plate set on fire, while, in the other no ignition was effected in the parts to which asbestos has been applied.

THE GATINEAU FORESTS.

A reporter of the Montreal *Star*, in a description of the Gatineau Valley says:—"The existing forests of the Gatineau districts are as nothing in comparison to the original ones, the lumber trade or bush fires having swept off most of the huge pines which lorded over the country when Canada was discovered. They are for the most part composed of hardwood, varying in size according to the date at which the country they stand on was cleared of pine. Most of the uncultivated country is covered thickly with maple, oak, birch, elm, beech and other hard woods, which are used as fuel, and the Gatineau railway when built will be able to bring out enough cordwood from this district to alone make it a promising investment. Again there are large quantities of valuable butternut and ash, almost invaluable through its size for the manufacture of furniture and carriages, which is at present being wasted, but for which there will, undoubtedly, be an unlimited demand as soon as it is within reach of the outer world. In the moist places cedar grows in abundance, while spruce and hemlock are very often met with."

NORWAY.

The Christiana correspondent of the *Timber Trades Journal* writing on Dec. 11th, says:—We have now had thorough winter for about a month, and, notwithstanding many prognostications to the contrary, it seems to have settled down for good. A fair quantity of snow having fallen, the transport of logs from the forests will be as easy as can be, and this year's crop of hay having been abundant, the hire of horses is likely to be cheap. Under these circumstances it would seem probable that a great quantity of timber could not fail to be brought forward for next year's sawing season. However, much will depend upon the prices, which have yet to be fixed. As the peasants have had a pretty good harvest, they will be independent; and on the other hand, shippers are not likely to go in for allowing last years rates, the same having given little or no profit, and prospects on your side not being particularly bright. It is likely, therefore, that the favourable state of the "winter roads" will not be taken advantage of to the extent that it might have been under other circumstances.

SPRUCE IN ENGLAND.

The *Timber Trades Journal* of Dec. 23, says: The heavy and somewhat sudden arrivals of spruce deals in Liverpool have had the effect of bringing down prices. Sales have been made during the week at reduced figures, and we hear of orders having been booked in the country at £7 5s. ex quay. The fall may, however, prove to be only of momentary nature, and it is quite possible that prices may rebound when the bulk of the wood ex quay has been dealt with.

Spruce deals have been offered at reduced figures, and sellers have displayed some anxiety to rid themselves of stock. Why holders of spruce should be unduly anxious to take orders is not quite clear. The demand for wood in those districts where spruce is most largely used is certainly now as good as it was during the corresponding period of last year, and there exists every likelihood that a steady demand will continue during the early spring months,

FOREST PROTECTION.

If our law makers throughout the country represented with anything like faithfulness the awakened interest of the most intelligent part of their constituents, says the New York *Tribune*, the coming winter would not pass without some efficient legislative action, state and national, in the matter of forest protection. Special enactments are needed in different states to meet the dangers which threaten in each. In the lake region laws to protect the remaining pineries from fires should be passed at once. In the south where forests are preyed upon by browsing animals, as well as by fire, and devastated by the wasteful production of turpentine, legislation of another sort is demanded. The first duty of our own legislature is to protect the Adirondack woods from further invasion. In California the imminent danger is from mountain torrents, and the state government should co operate with the federal government to preserve the forests about the fountains of the streams which head on the western slopes of the Sierras.—*Lumberman's Gazette.*

A Satisfactory Test.

A test of Mr. Hubert's new fire-proofing material, which is intended to take the place of iron beams in constructing fire-proof buildings, took place lately at Schillinger's stone yard at 92nd street and avenue A., New York city. The material consists of coal ashes and plaster paris moulded into strips one and one-half inches thick. A large oven built of this combination was erected in the yard. The top of the oven was coated with the fire-proofing, so as to represent the ceiling of a room, and above which there were a number of wooden beams, around which were nailed strips of the same material, these being surmounted by a wooden floor. At 2.30 p.m. a fire was started in the oven and allowed to continue to burn fiercely for an hour and a half. The fire was then extinquished with water and it was found that the floor was scarcely warm, while a beam that was directly across the flue was only slightly charred and a very small piece of the ceiling of the oven had fallen. It is claimed that iron beams would not have stood so severe a test in such a satisfactory manner and that the cost of this method of fire-proofing, will be about 33 per cent of that now employed.

Muskegon Enterprise.

The *Lumberman's Gazette*, of Bay City, Michigan, says:—The late trip of the Muskegon lumbermen is fraught with great significance especially in Chicago, the most important lumber distribution centre in the west, and in fact in the world, it being virtually without a rival in the amount of lumber handled, the entire product of the Saginaw Valley being insufficient to supply more than half its needs. The Muskegon *Chronicle* in alluding to the movement just inaugurated to effect a scheme for the handling of Muskegon lumber product at that point direct, says: The *Northwestern Lumberman* represents the Chicago dealers as calculated on how low a price they can offer our mill men for the lumber now cross-piled on the docks. They should save themselves this trouble, for Muskegon intends henceforth to dispense altogether with the services of Chicago dealers.

The Manchester Canal.

The Manchester City Council have confirmed the report of the sub-committee appointed to inquire into the feasibility and desirability of of the Ship Canal Scheme. The sub-committee, it will be borne in mind, submitted a highly favourable report. A member of a leading Liverpool house of timber importers has publicly expressed the opinion that the Ship Canal will not materially damage the wood trade at Liverpool. It has been resolved to seek the sanction of Parliament for the scheme to be subscribed to out of the rates. Incidentally it was mentioned that a million pounds would be a fitting sum to subscribe. The project has not been well entertained by the Manchester press. —*Timber Trades Journal.*

HOOPER & CLARK, pump manufacturers at Lewiston, Me., in connection with a gentleman of Portland, have purchased 3,000 acres of timber land, and will cut spruce and hardwood lumber. Their portable saw mill will be discarded for a permanent one of respectable capacity, which will be driven by 120-horse power engine, and built in the woods. A wooden tramway several miles in extent has been laid, on which cars are now running. The lumber will be shipped from Philips, distant 10 miles from the mill.

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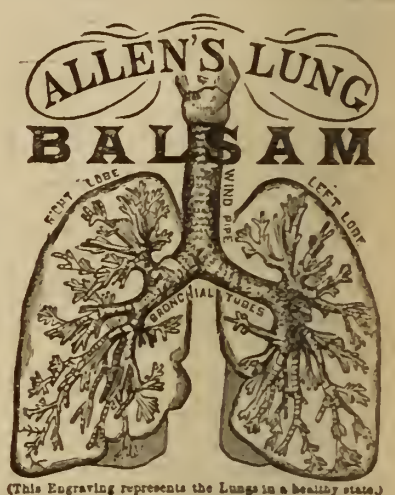

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FUEL FOR THE FUTURE.

It is not now thought that the electric light will come into serious competition with gas, or even oil, for some time to come. As a result of this conviction gas shares are now going up, both in Europe and America. Mineral oils are likely to share in this improvement. A factory in Mayence (Germany) lately installed gas works, not only for illuminating, but also for heating and manufacturing purposes. The gas, which is made from mineral oils from Weissenfels, is purified by using a mixture of two parts of saw dust and one part of flour of sulphur, to which a small portion of slackened lime is added. A saturated solution of sulphate of iron is then poured over. The composition can be used for three operation if the mixture is stirred. It is claimed that 50 kilos of the Weissenfels oil has as great power as 75 kilos of Scotch mineral oils. Be this as it may, there is little doubt that gas will be a popular fuel of the future, both for heating and cooking purposes. The gas stove is rapidly finding its way into Canadian households. In this city at present there are nearly two hundred coal oil stoves in use, and said to be giving good satisfaction. Between oil and gas stoves and the more extended methods of heating and cooking by steam, the solution of the question of cheap fuel is not far off.—*London Free Press.*

Timber Limits in Muskoka and Parry Sound.

Mr. Meredith inquired in the Ontario Legislature on Thursday, (1) what rates of dues were prescribed by the conditions of sale of the 487 square miles of timber limit in the Parry Sound and Muskoka districts sold in 1881; (2) whether a reduction has been made in the amount of such dues, and, if so, to what extent and during what years; (3) whether any order-in-Council was passed authorizing such reduction, and the data of such order-in-Council, if any.

Mr. Pardee said the original dues were $1.50 per 1,000. They had been reduced to the uniform rate of 75 cents, the reduction being made by order-in-Council on Nov. 20, 1876, it being ratified by the House during the following session.

Importance of Timber Culture.

The New-York *Tribune* says :—The appointment yesterday of two commissioners in Vermont, to enquire into the condition of the forests of that state and to recommend such measures as may be needed for their protection, is a step in the right direction. The forests of the eastern states are daily becoming more valuable as the western pineries disappear, and there are thousands of acres of poor land in New England and elsewhere, not available for ordinary farming, where, with a little encouragement from the State Legislatures, timber culture might be made to pay. Vermont has not appointed her commissioners a day too soon.

Second Growth Pine.

According to Professor Sargeant, of Harvard College, Michigan and Wisconsin will some day find rivals in Massachusetts and other New England states in the production of white pine, which is a second growth in those states. The product sawed in Massachusetts in 1880 was worth $1,000,000. Vermont and New Hampshire produced 100,000,000 feet, and Maine as much more. This, of course, to a Michigan or Wisconsin lumberman of to-day, is a trifling affair, but in the future, when the pine resources of this region are exhausted, it may seem quite important.

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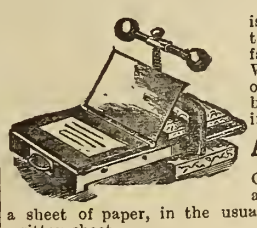

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September 28th, 1882. 1yl13

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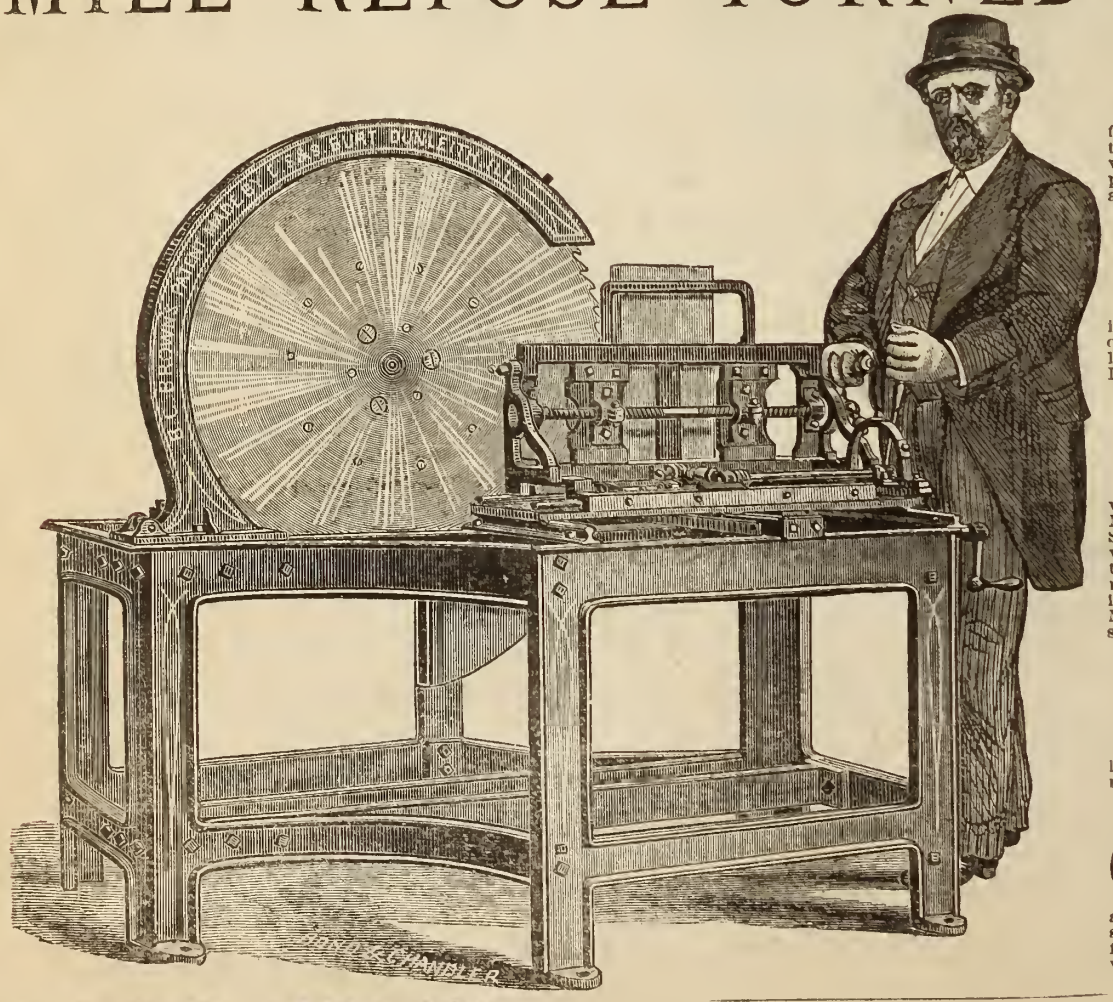

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are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a specialty, any party wanting a First-class Mill will find it to their advantage to give me a call.

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PUBLISHED SEMI-MONTHLY.

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VOL. 3. PETERBOROUGH, ONT., FEBRUARY 1, 1883. NO. 3.

It is said that a firm dealing in walnut lumber at Jacksonville, Ill., recently secured a stump near Wayland, Mo., that weighed 3,636 pounds for which they were offered 11 cents a pound, or $333,96, but the firm was holding it for 15 cents a pound.

The Portland Fiber Ware Company, of Brunswick, Me., has formulated a varnish most valuable for use on woodenware. One of the important accomplishments promised is to make shingles practically indestructible by coating with this varnish, and a variety of articles will be rendered durable and serviceable by that means.

A correspondent writes to the *Timber Trades Journal*:—There have been few, if any, really good years since 1873, and our Swedish friends were actually obtaining last spring better prices than they did in January, 1873. The question is, Can this last? I think not. General trade here is far from satisfactory. No doubt the volume of business is large, but the results are in too many instances very small. On the other hand, immense profits have of late years been made in the trade in Sweden. The result is a large increase of saw-mills and speculations in wood. These, combined with the recent development of railways, so often referred to in your *Journal*, point to an increase in the supply. Under these circumstances prices *should* reach a lower level, and in my opinion *will*. If they do so it will eventually be better for all concerned.

CYPRESS WOOD AND LUMBER.

The products of the immense cypress forests of the south are slowly but surely finding a market, and in no very long time the demand for the excellent lumber and unrivaled shingles made from this wood will be difficult to fill. It is stated that when the saw mills at Beaumont and Orange, Texas, began manufacturing cypress lumber they found very little demand for it, but they have since quadrupled their production, and find an easy market for all they can saw. This lumber is just beginning to be introduced into the northern markets, and its advantages are now acknowledged. The wood is fine grained. After exposure to the air it becomes a dim redish color. It possesses great strength and elasticity, and is lighter and less resinous than the wood of the pines. To these properties is added the faculty of long resistence to the heat and moisture of a southern climate. The color of the bark and properties of the wood vary with the nature of the soil. Trees growing near the natural bed of rivers, and surrounded half the year with water to the height of three or four feet, have a lighter-colored bark than those standing where water does not reach them, and the wood is whiter, less resinous and lighter. These are called white cypress. The others are darker and so called red cypress. This truly excellent wood is now used for various purposes, and there is an increasing inquiry for it. Boat builders use it to a considerable extent. Many of the small boats belonging to the men-of-war of the United States service are constructed of cypress; much is used for water tanks, sugar coolers and cisterns, on account of its durability; some enters into the construction of houses and house finishing, it being excellent in ceiling, and large quantities are made into shingles and cross-ties. The Lehigh Valley railroad company ordered 75,000 of these ties to be used upon its road this season. In some instances the shingles are manufactured with the large end finished round and octagonal that the roof may present a finer appearance. These kinds are used upon churches in the rural districts and upon villas where the builders wish to display some taste in lines that vary from the ancient straight and conventional methods. Some claim that shingles, properly prepared, will last 100 years. They are certainly very durable. Wood taken from submerged swamps which has been in contact with the decaying influence of mud and water for untold centuries, is found to be in an excellent state of preservation. Cypress logs have been taken from the soil deep underneath New Orleans in good condition. Evidences are abundant and conclusive in regard to the lasting properties of the wood. Hence, it is gradually creeping into use more and more each year. Already it is being used in many houses in New York city in finishing, with calls for more. Five million shingles is the estimated amount of consumption in the New York market, with an increasing demand. At least 4,000,000 feet of the wood will be required to supply the market in railroad ties the coming year, and about 2,000,000 feet of lumber for general use. It is exported to some extent to various ports. Railroad ties have been sent to Cuba, France and England. Lumber has been sent abroad, but in no great quantities.—*Lumberman's Gazette.*

THE PINE BELT OF THE SOUTH.

A correspondent writes from Brainbridge, Ga., to the *Northwestern Lumberman* as follows: Until the extent of the great pine forests of Michigan and Wisconsin was thoroughly known, but little attention was paid to the timber supply of the south Atlantic and Gulf coasts. Other causes, not necessary to mention here, united in this overlooking of the finest belt of yellow pine in the world; now, however, when the timber supply of the Northwest is being lessened, the advantages offered by the South, in the way of timber resources, is attracting attention.

The yellow pine region of the south presents some peculiar features which I will briefly notice: Beginning in North Carolina, it stretches back to the hills which mark the ending of the Apalachian chain of mountains, a distance varying from 100 to 200 miles, and extends along the Atlantic seaboard and the Gulf coast westward, till the valley of the Mississippi is reached. The width of the belt is nowhere greater than 200 nor less than 100, and its length is 1,000 miles approximately. For an average distance of 50 miles from the seaboard the land is low and marshy, with stagnant ponds on every hand, and the lumber of inferior quality. A gradual ascent is then begun till an altitude of 300 feet above tidewater is reached. At this altitude the finest timber is found.

A few leading questions present themselves to those looking for timber lands—quality of timber, and quantity as well, price of lands, and accessibility to transportation. These questions I can answer, so far as this section of Georgia is concerned.

Decatur county has an area of 1,500 square miles, and it is safe to say that there is in the limits of the county 500,000 acres of virgin pine forests. In addition to the local supply, Flint river traverses near its centre from north to south, and for 100 miles runs through unbroken forests of pine, while on the west side of the county is the Chattahoochee river, which also runs through a section well supplied with timber. So much for quantity, and quality is of the very best.

Timber lands vary in price from $1 to $2 per acre, owing to location, and are abundant at the prices.

What I have already said of the Flint and Chattahoochee rivers will give an idea of their availability for transportation of lumber and timber. These rivers are navigable for large steamers the year round, and there are no obstructions in the way of rafts. They unite and flow into the Gulf of Mexico at Apalachicola, Florida, which has a harbor admitting vessels of 10 feet draft. The government is now improving the bar off the harbor, and vessels drawing 14 feet will be able to load at the wharves.

In addition to the river transportation, direct railroad communication is had with Savannah, and lumber can be placed on shipboard there at a cost of $4 per thousand.

Timber lands at the prices I have mentioned are not more than three miles from river or railroad, and thousands of acres can be bought on river and railroad at the figures named.

In the way of health, water and such incidental advantages, the country offers superior inducements—the climate is healthful and mild and water abundant.

CANADIAN TIES FOR FRENCH RAILWAYS.

The visit of M. le Chevalier Drolet to France has been fraught with much interest to the Dominion generally, and the lumber trade in particular. Mr. Drolet went over to Paris for the purpose of bringing prominently before the French Government the superior quality of Canadian timber, more especially as regarded its transformation into railway ties and sleepers. Mr. Drolet took over with him several samples of tamarac railway ties, in order that the French Government, in their immense railway schemes, in which they expected to be able to use some six millions of ties per year, might have a portion of this immense demand satisfactorily and profitably supplied from Canada. The forests which have hitherto been drawn upon for sleepers lie on the shores of the Baltic, in Danubian principalities and in Italy. The samples in question, from Canada, were shown by the Chevalier to M. Herrisson, Minister of Pubic Works, who was much pleased with them. A series of tests were ordered to be applied to the samples, and much curiosity was felt amongst those interested as to what strain the new timber would stand, as the tamarac is not indigenous to France. The experiments took place at the Ponts-Chaussees, Paris, about the end of November, and under the supervision of M. Durandeleye, chief engineer of the institution. The tests consisted of severe traction and crushing, and also large screws were inserted into the ties and then pulled forcibly out, in order to show the amount of resistance of the grain of the wood. The tests were pronounced satisfactory, and Mr. Drolet was on the point of signing a contract to deliver 7000,000 ties. At this critical juncture Mr, Leon Say's celebrated article on Finance appeared in the *Journal des Debats*, in which that statesman counselled the Government to practise the strictest economy. It was stated that the railway scheme, which under the de Freycinet Government would have only cost four millards of francs, would now cost eleven milliards. The result of this article was that the Government abandoned for the present the construction of the railways, and the Minister of Public Works informed Mr. Drolet that the question of the contract would have to be postponed until next June, when the work wonld doubtless recommence.

"The question now is," says Mr. Drolet, "whether the French Government will continue the railways, or hand them over to the great companies. In any case, we are sure of a market, as some of the tests were made by the Chemin de Fer de L'Ouest, and somewhat surprised them. I was compelled to decline a contract to deliver 370,000 ties at Bayonne to be used in the construction of a railroad in the north of Spain, on account of the lateness of the season. The ties used in France are longer and thicker than those used here, and are required to be sawed on four sides. When the contract is signed the French Government will have agents on this side to receive and stamp the ties and afterwards ship them. This, of itself, will be of considerable advantage to the city."—*Montreal Star.*

PRESERVATION PROCESSES.

The are several solutions to the timber denudation problem. To start with, it is much more a scare than a reality. That everbody has a chance to know that white pine and other woods are annually manufactured and consumed to an enormons extent is not doubted, as well as that the rate of utilization has latterly increased. But there are several reasons why the period of actual exhaustion is much farther distant than much of the popular noise on the subject would indicate. That result is, in fact, so far ahead of present calculations that it need trouble this generation very little, unless its faith in Providence is gone, or it has an unnecessary solicitude for posterity. One important fact is that the supply remaining is by no means so microscopic, comparatively, as interested or ignorant figurers have asserted, a point which the *Lumberman* has for some time been insisting upon, particularly with regard to the white pine of the North. The fact, also, that substitutes can be employed when wood is not obtainable is being currently and practically demonstrated; the possibilities in that direction having been repeatedly discussed. A further potent factor which will figure is a tendency, both necessary and economical, to temper and reduce the volume of consumption. Before it becomes positively demanded that no wood shall be employed for certain purposes, because of the lack of it, the enterprise affected will have already developed a way of supplying wants with other material, and of making those which are used more enduring. There are a great many possibilities that have not been worked out, many scientific questions of which merely the surface has been brushed, and numerous future developments of great import may be counted on of which nothing whatever is dreamed now. If this should not be so, then abstract science must have reached a standstill, and science is so restless it will never be open to that indictment.

No doubt one of the most momentuous points involved is the question of the durability of wood, and the means whereby it may be increased. It makes a vital difference in dollars and cents, as well as in the question of supply, whether a piece of timber will last 10 or 20 years. By having its power of existence extended it not only obviates the purchase of new material, but a more or less heavy expense, many times, in the general reorganization of a structure. Very often a process of timber preserving will cost about as much as the wood itself, which is no object provided it brings assurance of permanence and strength in the materials employed, and hence the structure itself. Such processes, while making the qualities of the raw material available to the greatest possible extent, may also bring into a more practical field certain woods regarded inferior on account of lacking the virtue of endurance, making possible the use of a greater variety of timber for certain special purposes, and somewhat checking a tendency to sweep away and appropriate to a number of purposes the cream of the timber, to leave standing large amounts of other kinds considered of little account or worthless.

A great deal has been said, from time to time, on the subject of preserving timber, but not enough that was definite. The more that is known in this direction, the better for the industries of the country generally. A committee of the American Society of Civil Engineers has spent a large amount of time and effort in collecting from all possible sources the results of experiments and actual experience in this line, which necessarily must cover a series of years. In its researches the committee met with many obstacles in the way of arriving definitely at the facts. The records of experiments which had been carried to the proper extent regarding time were often insufficient on the subject of detail, and the precise methods of accomplishing results, where the latter were stated. Out of information regarding 88 experiments, the oldest dates back to 1839, and pertains to the building of Fort Ontario, at Oswego. The processes mainly touched on are kyanizing, burnettizing and creosoting. In the case mentioned the first process was adopted. In the revetments of earthworks 92,000 cubic feet of 12x12 and 6x12 timber was used, with some smaller, all of which was immersed in a solution of one pound of corrosive sublimate to 15 gallons of water, for from 14 to 21 days, the cost being about $6 per thousand feet—about the cost of the timber. Hemlock was mainly used, with some basswood, beech and maple. The work was completed in 1843, and it is reported that an inspection in 1882 showed nine-tenths of the shorter timber still standing, while two-fifths of the upper halves of the larger timbers, with their cap timbers, were yet in position. Out of 100 standing timbers, whose lower ends were below the surface, 60 seemed entirely sound, except for about six feet from the surface upwards, the remaining 40 being more or less rotten throughout the length. The sides of the timbers towards the earth in the rear seemed as sound as where exposed to the air. Much of the other hemlock timber was sound, the beech and maple having rotted, with the exception of a slight shell. In one case at Lowell, kyanizing was rejected for burnettizing (saturating with chloride of zinc), and the latter being found less effective, the first means was repeated with very satisfactory results. In 1856 the Central Vermont railroad established works for saturating timber with chloride of zinc under pressure, a similar process being now in operation in Germany. The plant was in use four years, when it was abandoned because of the excessive labor and time required to prepare large quantities of heavy timber. The burnettized hemlock ties were inspected however, and found in a sound condition after 25 years' use.

The Chicago, Rock Island & Pacific road, in 1866, laid 2,000 burnettized hemlock, pine, tamarac and cedar ties in the main track west of Englewood, within a few miles of Chicago, and under a heavy traffic. The ties were mainly hemlock, and after 15 years' service three-fourths of them was still in the track, and good for three or four years more. Those taken out were sound and solid in the centre, and decayed only one-half or three quarters of an inch deep on the surfaoe. The rails had worn into the hemlock no more than they would into oak. The tamarac lasted about equal to the oak, while the pine and cedar had disappeared. The hemlock, when untreated, this road find to first decay in the centre. In 1872 this road laid 5,000 creosoted ties in a second track near Chicago, but they are not believed to have been thoroughly treated. They were sound on the bottom when examined in 1882, and badly decayed on the surface, and were cut by the rails more than the burnettized hemlock ties. What ties remain will probably be removed in the summer. The same authority places the life of untreated hemlock ties in sand or gravel ballast at not more than five years, a thorough treatment with chloride of zinc making them last 15 years. The same road erected a Howe truss bridge of burnettized timber, 150 feet spans, in 1860, which it was intended to rebuild in 1882, and which is still in fair condition.

The New Orleans & Mobile road has found that the indefatigable boring genius, the toredo, will not attack creosoted timber.

The Houston & Texas Central road is stated to be the only road in the coudtry now having a plant for preserving timber. It removes sap by applying super-heated steam and injecting dead oil under pressure, and within two years has treated about 150,000 cross ties, of a short-leaved Texas pine, which ordinarily lasts only about two years, being so porous that, when thoroughly seasoned, it will absorb over two gallons of oil to the cubic foot. About five gallons to a tie is generally used, which is insufficient to thoroughly saturate them. They were found perfectly sound after seven years' use, except in parts where the oil had not penetrated. The timber is hardened by the treatment, and does not show any serious wear.

The most of the evidence is in favor of hemlock, which, by treatment, can be made superior to untreated oak, while many absolntely worthless woods may be rendered valuable. The result will gradually lead to the more extensive use of hemlock, which will have an enhanced commercial vale. Of course the idea of treating timber, as the experiments show, is nothing new, but it is by no means as generally in practice as it might profitably be placed, nor the processes so thoroughly understood as they should be. While one treatment may be superior for one kind of wood, another process, possibly unknown, may be needed for a different wood, the durability of which might thus be increased as greatly proportionately as in the cases cited. There is, at least plenty of hemlock, which can be utilized to good advantage. In some sections the ties are conveyed such long distance, owing to the absence of suitable timber in the vicinity, as to make the expense border on the enormous, which might not be so if the idea of a proper treatment of the wood was more generally carried out. Besides the financially practical features the subject presents, the preserving processes will do much toward husbanding present supplies. Moreover, the experimenters, as may be seen, are beginning to learn better what may be done.—*Northwestern Lumberman.*

THE LUMBER SITUATION.

We take the following from the lumber review in the Montreal *Journal of Commerce* on the lumber trade for the past year, and the situation at the close of it:—

Although the English markets show signs of considerable improvement, which it is to be hoped may continue, we cannot refrain from expressing the belief—the result of observations for the last few seasons—that ere many years wood products will be more valuable at this side than in Europe. The enormous consumption going on, especially in the United States and Canada, cannot fail of this effect. The requirements for home consumption in the older provinces are every year increasing, while Manitoba and the North-West are only beginning to indicate their wants. The shipments to these new customers from Canada and the United States during the past year were over 100 million feet B. M., and these must go on increasing as the territory is colonized. It is probable that at no very distant date but very little of the products of our forests will be shipped to the European markets, excepting, perhaps, those kinds for which other North of Europe goods cannot be substituted, such as first-class white pine timber and deals, white oak of large size, and probably hardwoods and pitch pine from the United States ports. Lower grades of pine and spruce will find better prices on this side than English markets can afford, as long as they possess cheaper substitutes from Norway and Sweden. This change is now going on, as far at least as Quebec is concerned, as evidenced by the gradual decrease in exports shown by the following clearances from Quebec for the last nine years:—

	Vessels.	*Tons.*
1874	854	636,672
1875	642	478,411
1876	786	624,110
1877	796	670,627
1878	476	399,833
1879	433	364,628
1880	634	555,451
1881	459	380,186
1882	426	359,925

And the prospects are for a still further decrease in 1883. This may be clearly ascribed to the large supplies from North Europe at low prices, while our American markets will absorb any probable or possible production at relatively higher prices than European market will pay.

Wintering stocks are a trifle greater than last year, but yet considerably lower than in former seasons. Prices have ranged during the season about as follows:—

	1st. Qual.	*2nd Qual.*	*3rd Qual.*
White pine deals	$104 to $112	$68 to $72	$36 to $39
Spruce deals	$ 38 to $ 40	$26 to $28	$23 to $6

All these are per Quebec standard (2,750 feet) ex quay, mill cutting and mill specification.

Timber, white pine in raft	20 to	$5
" red "	15 to	25
" oak in dram	45 to	50
" birch	20 to	25
Staves, pipes	$3.75 to	$3.90
" puncheons	90.00 to	100.00

Freights ruled about as follows:—

	Timber	*Deals.*
Opening at	23 to 25c.	60 to 65c.
Closing at	30 to 35c.	70 to 80c.

Operations in the woods for the coming season in Canada are on an increased scale for the United States markets, and on a reduced scale for European markets. The weather thus far has been all that could be desired; there is at present, however, some appearance as though operations would be hampered by too much snow. This, however, is only one of the many ordinary incidents of lumbering; everything is high in price, pork unusually so; labor is also abnormally high; in fact, in this district it is not a question of wages at all, it being absolutely impossible to get a regular supply of work men for the woods. Large numbers have been lured away to the Michigan and Maine forests at high wages through the efforts of hiring agents who have scoured the province from one to the other.

We hear of few or no sales of new mill cuttings for next season; manufacturers are holding for stiff prices, and exporters are waiting to see how the English markets may develop during the coming months. But these last remarks refer to deals only; we understand that some contracts have been made for Michigan and Ohio oak timber and waney square pine at probably a slight trifle advance on the prices of last year. We can never expect to see the two latter classes of timber at old prices again, for while the supply is diminishing every year, the demand on the other hand is increasing.

SECOND GROWTH PINE.

An interesting paper by Mr. Edward Jack, of New Brunswick, appears in the St. John *Telegraph*. Our readers should ponder, as it contains some valuable hints relating to the second growth of pine. Mr. Jack is an authority on the subject, and his remarks carry a good deal of weight. He says:—

"A few weeks since, just after the railway cars in which I was riding had passed through the Hoosac Tunnel, the news agent handed me a copy of the Springfield *Republican* of December 9th. As I glanced over it my eye fell upon this passage:

"'The second growth of white pine sawed in Massachusetts, census year, was worth about $1,000,000.'"

"This was an extract from a paper lately read at the State Board of Agriculture in Northampton by Prof. Sargent, of Harvard College. The Professor says that 'a large portion of the neglected farming lands in Central and Southern New England is growing up to white pine,' and could that growth be encouraged and protected, Prof. Sargent sanguinely predicts that its value in Massachusetts, alone, would in a few years exceed the net profits upon half a century of farm crops.

"This statement attracted my attention so much that I made it my business, for the rest of the journey through this part of Massachusetts, to notice every grove of second growth pine, as well as every board pile visible from the car windows. The numerous piles of pine board which met my view, as we passed along, were with but few exceptions, sawn from small second growth trees. What I saw convinced me that if Massachusetts could make large profits out of second growth pine, New Brunswick could do the same.

"One-third of our Province is embraced within the limits of the grey sandstone of the Coal Measures, the meagerness of whose soil is so well described by Prof. Johnston, in his Report on New Brunswick. This soil, although suitable to the growth of little else, is well adapted to that of the White and Norway pine, and clumps and groves of these woods are now springing up all over the burned lands of these districts. Indeed many a good pine log has been cut in New Brunswick on ground swept by the Miramichi fire. Looking across the Nashwaak from the highway near the dam, at Mr. Gibson's mills, one sees on the south side of the river a growth of stout sapling pine, which will soon be fit for timber. It is not many years since the land on which these trees are growing was under crop, and did others exercise the same care that Mr. Gibson has done, in this case, the benefits to accrue to the country would be immense.

"It is not, at present, needful for us to plant trees on our waste lands; all that we are required to do to secure in not very many years an immense return from these lands, would be to protect the trees which nature, herself, has caused to grow upon them. The question

arises, How can this be done? Probably the best way to attain this end would be for the Government of the country to offer a prize of, say $500, for the best 50 acres of second growth pine land, which is to be found in the country at the end of ten years, say from the date of making the offer, with second, third and fourth prizes of less value to other tree preservers of like extent. People thus preserving their trees would find that, beside the value of the bonus, there would be a real cash value in the lumber which they had protected, and others would be led to follow the good example set them. Of course there would have to be conditions attached to the grant of bonus, and the age of the trees would have to be taken into considsration, as well as the care to to be bestowed upon them. This, it seems to me, would be the readiest way of awakening our people to their best interests in this matter. It is almost unnecessary to remark on the destruction of the forests of America; on the policy of all enlightened European Governments in conserving their forests, and on the innumerable bad economic and climate results of the wholesale removal of forests, either by fire or the axe of the woodmen. These facts have just begun, almost too late, to make an impression on the people on this side of the Atlantic."

THE ALLEGED UNHEALTHINESS OF WOOD PAVEMENTS.

A perfectly unreasonable objection is now made against cedar block pavements, on the ground that they are unhealthy. This objection is worth meeting, for it is the last kick of an opposition to reformed roadways, which once was a formidable enemy to the public good.

Wood as a material for roadways is no more justiy chargeable with unhealthiness, because of the presence upon it of filth, than is any other pavement allowed to get into a similar condition. If some of those who object to wood pavements because the Corporation neglects its duty as conservator of the roads would kindly indicate a road material able to keep itself clean the world would be greatly obliged. It is not fair to attribute to the material of which the road is made the responsibility for the foot or more of mud which is often allowed to accumulate upon it. The only ground upon which wood as a road material can be charged with unhealthiness is its liability to decay.

Let us look into this matter. At the start we are confronted with the fact that the European cities which have had ages of experience with all kinds of roadways are at last adopting wooden blocks. In one place wood is superceding macadam; in another, cobble-stones; in another, asphalt; in another stone blocks. Is it likely that all these old tried pavements would be abandoned for wood if there were any sanitary objection to the latter? And is the state of sanitary science in Europe behind its state in Toronto?

Let us look a little further into the matter. Wood decays. Quite true with respect to pine and hardwoods, but only remotely true as respects cedar. On our streets cedar will wear away long before it will rot. But admitting that the cedar blocks do decay, what an inappreciable addition to the vast mass of decaying wood or vegetable matter. Our streets are lined with sidewalks of decaying wood. We walk on floors made of decaying wood. Our houses are frequently built on posts of decaying wood and are pitched upon soil a full half of the upper stratum of which is decaying wood or vegetable matter. Our streets are lined with sidewalks of decaying wood, laid upon sleepers of rotten wood, and they upon earth which is reeking with vegetable rottenness. At least ten times as much wood rots away every year in Toronto sidewalks as will ever rot away in the roadways, in the form of cedar blocks. Then we have thousands of trees in our streets, and upon every one of them more or less of rotten wood. In the autumn these trees shed numberless millions of rotting leaves. Millions upon millions of feet of wood are decaying in our fences; and last but not least, this is still a forest country, and the air comes to us laden with gases given off by an incalculable amount of rotten wood and vegetable matter. The addition of a few miles of cedar blocks upon our streets would make a smaller addition to the amount of the gases of rotten wood in our atmosphere than would be made by the addition of a bucket of water to Lake Ontario.—*Toronto Globe.*

A HINT FROM JAPAN.

A notable instance of the Japanese understanding of the conditions under which they exist occurs in the manner of giving security to pagodas, says Dresser's "Japan." Pagodas are of great height, yet many have existed for 700 years, and have withstood successfully the many vibrations of the ground, which must have inevitably achieved their overthrow had they been erections of stone or brick. When I first aseended a pagoda, I was struck with the amount of timber employed in its construction; and I could not help feeling that the material here wasted was even absurdly excessive. But what offended my feelings most was the presence of an enormous log of wood in the centre of the structure, which ascended from its base to its apex. At the top this mass of timber was nearly two feet in diameter, and lower down a log equally large was bolted to each of the four sides of this central mass. I was so surprised with this waste of timber that I called the attention of my good friend Sakata to the matter, and especially denounced the use of the central block. To my astonishment he told me that the structure must be strong to support the vast central mass. In my ignorance I replied that the central part wat not supported by the sides, but upon reaching the top I found this monstrous central mass suspended like the clapper of a bell; and when I had descended I could, by lying on the ground, see that there was an inch of space intervening between it and the earth which formed the floor of the pagoda. The pagoda is to a Buddhist temple what a spire is to a Christian church; and by its clever construction it is enabled to retain its vertical position even during the continuance of this vast pendulum the centre of gravity is kept within the base.

THE CARE OF STEAM ENGINES.

A contemporary has gathered the following instructions for the care of engines:

Never allow an engine to become dirty.

Never depend entirely on patent oil cups.

Do not allow the packing to become hard and dry in stuffing boxes, as it has a tendency to cut and flute the rods.

Never strike any part of an engine with the face of a hammer or head of monkey-wrench.

Never set steam packing, cotton waste, tops oil cups, or anything whatever that is to be used around the cylinder, valve, piston-rod or bearings of steam engines, on the floor, as they will invariably pick up sand or guit, which injures the rubbing and revolving surfaces with which it comes in contact.

When practicable, piston and valve packing should be applied when the stuffing boxes and rods are cold. The best packing is often destroyed through ignorance or want of skill.

Almost any packing may be improved by being soaked in beeswax, tallow and black lead.

Gum joints that require frequently to be taken apart should be coated with chalk before being placed between the flanges. This prevents the gum adhering to the metal and being destroyed when the joints are taken apart.

All gum joints located in the water space of steam boilers should be coated with lead and tallow before being put together. This has the effect of preventing the sulphur of the gum from attacking the metal and destroying the surfaces.

Always see that the cylinder drain cocks are open when the engine is standing still; never close them till after starting.

Never admit the tallow to the cylinder until the engine is fairly under way and the cylinder drain cocks closed.

Before starting an engine always warm up the cylinder by admitting steam to both ends.

Always start an engine slowly, and allow it to come up to speed gradually.

Whenever an engine is stopped for any length of time, examine all its parts and see that they are in good working order.

When it becomes necessary to stop an engine with a heavy fire in the furnace, place a layer of fresh coal on the fire, shut the damper, and start the injector or pump for the purpose of keeping up the circulation in the boiler.

In case of extreme heating, slack up on the keys and gibs, permit them to run loose for a time; then take up the lost motion gradually.

Examine the piston packing in the cylinder frequently; keep it tight and in good order.

Keep your steam at the same pressure. If the steam is allowed to rise above the working pressure, the engine will increase its speed, which will induce a loss of speed, as every revolution above the speed at which the machinery is geared for the manufacture of different materials is a waste and every revolution the engine falls below the regular speed is a loss of production.

A NEW BINDING MATERIAL.

Tripolith is the name given by its inventors to a new binding material for builders, a substitute for lime, cement and plaster under certain circumstances, and which is composed of sulphate of lime, coke and oxide of iron in some form or other. While tripolith mixed with sand only, sets in 10 to 15 minutes, an addition of slaked lime may easily increase the time required for setting to 60 minutes. The specific gravity of tripolith is lower than that of plaster; the former is 1.678 the latter 1.696. Turning now to the test, we give the mean results in each case of five complete experiments.

The extraordinary increase of tensile strength after a long exposure to the atmospheric air is remarkable; it amounts to 100 per cent from seven to ninety days in mortar B, and to 189 per cent in mortar C for the same time. Compared with the tensile strength of lime and cement, the results obtained with tripolith are highly satisfactory. The compression tests point out for tripolith a position between lime mortar and cement mortar, but since after being fairly set it acquires about the same crushing strength as ordinary bricks, no more would be needed for general use. In setting, tripolith mortar loses in weight, and when placed in water does not absorb the latter so rapidly as ordinary mortar does. Its adhesion to brick, stone and other materials is very considerable, and the tripolith mortar does not either reduce or increase noticably in volume when setting. For facing and plastering, this material is excellently suited; it is easily handled and smoothed while soft, adheres well to brick or stone surfaces, and attains far greater hardness than plaster-of-paris, and oil or other colors adhere to it well.

ROMANCE OF THE CAMP.

The monotony of logging camp life is occasionally varied by something thrilling. Sometimes it is an accident, causing serious injury or death; at other times it is a fight, resulting in spotted countenances, or worse. Occasionally a bear or a wild cat is met in the woods, and the foundation of a narrative of lucky escape is thus laid, which the hero of the adventure never fails to make the most of. It is, however, seldom that the logger is treed by wolves, but here is a story, that comes from Wisconsin, which contains just such a rarity:

On the Tomahawk river, near J. E. Leahy's camp, December 23, while the cookee, James McNamara, was carrying the men's lunch out into the woods, and about one mile and a half from camp, he was set upon by a pack of six wolves. He dropped the basket and sought refuge by climbing a tree, and commenced to yell and shout; fortunately, he was heard by Frank Synnot, the foreman, and E. H. Gallagher, the cook, who immediately seized their guns, and started in the direction from whence the shouts proceeded; they arrived in time to see the wolves scampering off, after devouring the contents of the lunch basket, and to relieve McNamara from his perilous position, as he was almost tired out clinging to the tree. The enterprising foreman, knowing that wolves were around, from having heard their melodious lullaby, had procured some arsenic, a small portion of which he put on some meat, and placed pieces in different places, and on Christmas morning he had the gratification of finding six big, gray and black timber wolves, stretched their full length on the snow. The heads are now in possession of the clerk of Lincoln county, and the skins he sold to Charles Quandt, of Wausau.—*Northwestern Lumberman.*

The United States Timber Duty.

The Boston *Advertiser* says:—How is the duty to be defended as a measure of protection? The object of protection is not to confer a benefit upon the producers of the articles protected, but to benefit the whole country. Unless a protective duty either helps to develop an industry which it is important for the whole country shall be developed, or helps to maintain the existence of industries which the good of the country requires shall be maintained, there is no good defence of the duty. How stands the case with lumber? Under the present tariff the whole burden of the home demand for lumber is thrown upon the home forests. Less than six per cent. of the pine and spruce lumber manufactured in the United States in the course of a year is imported from Canada, which is our only foreign source of supply. But we use about eleven thousand million feet of these kinds of wood every year, and according to the last census there is left standing not more than eighty thousand million feet of white pine in the whole country.

For Fence Posts.

A writer in an exchange says:—"I discovered many years ago that wood could be made to last longer than iron in the ground, but thought the process so simple that it was not well to make a stir about it. I would as soon have poplar, basswood or ash as any other kind of timber for posts. I have taken out basswood posts after having set seven years that were as sound when taken out as when first put in the ground Time and wear seemed to have no effect on them. The posts can be prepared for less than two cents apiece. This is the recipe: Take boiled linseed oil and stir in pulverized coal to the consistency of paint. Put a coat of this over the timber, and there it not a man that will live to see it rot.'

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Dec. 30th, 1881 and 1882, aud also the Consumption for the month of Nov., 1881 and 1882:—

	Stock, Dec. 30th. 1881.	*Stock, Dec. 30th. 1882.*	*Consumption for the month of Dec. 1881.*	*Consumption for the month of Dec. 1882.*
Quebec Square Pine	348,000 ft.	292,000 ft.	190,000 ft.	190,000 ft.
" Waney Board	353,000 "	276,000 "		
St. John Pine	— "	— "	Nil "	Nil "
Other Ports Pine	— "	— "	— "	— "
Red Pine	26,000 "	65,000 "	19,000 "	3,000 "
Pitch Pine, hewn	510,000 "	629,000 "	120,000 "	89,000 "
" Sawn	471,000 "	606,000 "	99,000 "	85,000 "
Planks	— "	— "	— "	— "
Dantzig, &c., Fir	50,000 "	59,000 "	6,000 "	11,000 "
Sweden and Norway Fir	16,000 "	21,000 "	3,000 "	—
Oak, Canadian	347,000 "	335,000 "	119,000 "	46,000 "
" Planks	92,000 "	104,000 "	57,000 "	84,000 "
" Baltic	64,000 "	40,000 "	4,000 "	3,000 "
Elm	53,000 "	51,000 "	12,000 "	13,000 "
Ash	18,000 "	13,000 "	1,000 "	5,000 "
Birch	127,000 "	102,000 "	27,000 "	53,000 "
East India Teak	14,000 "	13,000 "	6,000 "	7,000 "
Greenheart	30,000 "	132,000 "	— "	6,000 "
N. B. & N. S. Spruce Deals	15,935 stds.	21,884 stds	6,379 stds.	6,002 stds
" Pine	718 "	330 "		
Quebec Pine & Spruce Deals	7,832 "	8,482 "	2,773 "	1,343 "
Baltic Deals	3,113 "	4,494 "	473 "	501 "
" Boards	198 "	400 "	48 "	168 "
" Boards Flooring	1,693 "	2,861 "	489 "	592 "

A LOOK-OUT.

Our readers will not expect from us a homily on the course of time, such as at this period befits the sages of the daily papers, who devote themselves to summing up the events of the past year, and moralizing on them like Touchstone in "As You Like It," to the edification, no doubt, of many of those who look to them for inspiration and guidance; but such diatribes would be inappropriate here. Of the great men who have been taken away from us since this time last year, and the little men who have become great, it is not our province to discourse; our mission is to investigate the progress of the timber trade, and to show from the familiar incidents of the past, and the state of affairs in actual present, what the course of business is likely to be in the coming year, on which we are about to enter.

Even this, however, we can only do incidentally just now, as we have to reserve for our summary of the year, about the middle of January, a more extensive survey of the trade; at present we must be content to touch on the prospects from abroad, without dwelling on those nearer home; and, indeed it is the foreign and colonial information upon which all our reasoning as to future supplies is founded.

We intimated a month ago that Russia was forming a chain of railways to connect all her workable forests with the nearest shipping ports, and, in fact, that the whole of them were now in communication with the sea. That is, perhaps too large a phrase when we think of the vast territory which the name of Russia represents; but it may be understood to mean that the forests within any feasible distance of the rivers that find their way to the waters of the Gulfs of Bothnia and Finland are now capable of getting their produce forwarded to the nearest rivers by means of railroads, where heretofore they were considered inaccessible to commerce on account of the serious impediments between themselves and navigation. On this account we may consider that, whatever the importation from Russia has been this year, it is likely to be very much larger in 1883.

From Norway the same increase is expected, and very much from the same cause. A great portion of the Swedish trade on the western borders will by the new railways find its way to Drontheim, we are told, and very much increase the trade there. Our Christiania correspondent also in our last number furnished reasons why "it would seem probable that a great quantity of timber could not fail to be brought forward for next year's sawing season." He suggests, however, the usual uncertainties, and the indisposition of merchants to pay the prices demanded in the interior as likely to check the supply; but we remember no instance of its having done so. The men who have timber to cut down during the winter for market will hardly be diverted from their purpose by a difference of a few shilling per standard when the price is yet remunerative; and, in fact, it is merely a question of the woodmen being out of employment or getting something less per week for their labor, and though they may hesitate over it for a while, we seldom hear of them refusing by strike to accommodate themselves to the changes of the times. What may help to keep Christiania prices at a fair level is the impression that a diminished production of flooring may be expected there, on account of the mills that were destroyed by fire this year, those of Messrs. Kjosterud, Breien & Co., and of Messrs. Maarud & Co., which have not been rebuilt. On the other hand, it may be assumed that it will render battens more plentiful, as fewer of them in that neighborhood will be wanted for conversion, especially as our correspondent allegos that shippers "do not appear very eager to secure them."

On the whole, therefore, we may set it down that there will be plenty of wood manufactured and unmanufactured, to come forward from Norway, and that it will come in some shape or other there is every reason to believe.

If we now turn our attention to Sweden, the chief source of our supply of European timber goods, we see every indication of a plentiful supply. The shortage that was foretold in 1880, but which did not come to pass in 1881, it was then explained to us, would not be seriously felt till the following year, as only 20 or 30 per cent. of the winter's cut came forward the same year. In 1882, therefore, we were to be punished for our incredulity; but this year had hardly begun when the theory had ceased to be listened to, and instead of a shorter export from Sweden this year, the first ten months of it gave an excess over the same months of last year in sawn and planed wood of 135,000 Petersburg standards, and no less than 55,000 loads of square and rough timber, the greatest export, we believe, ever yet reached in the same number of months, and leaving after it a larger remainder at the shipping ports, and on the way to them, than any previous season.

At the meeting of saw mill owners at Stockholm, on the 16th of December, respecting which we published a telegram in our last impression, the opening surplus to begin next season with was acknowledged to be 50,000 standards over that of last year, and, without any inclination to ascribe to those gentlemen a desire to mislead buyers on this side, we may safely say they were not likely to err in the direction of overstating the case. Possibly 100,000 standards may be nearer the mark, but it is by no means necessary to press the point. With more than an average winter supply in this country, a great many vessels frozen up in their ports with cargoes, which could not get away in time, and a larger stock than usual for f.o.w. shipment, it is within the boundary of rational probability that any increase of price can be established in those regions during the coming year?

Yet our correspondent tells us that in the north of Sweden "there is a decided stiffening feeling prevalent among holders of sawn stocks;" but he admits that it will not be wise "to stand out for the full prices obtained during the early part of the last season," though the output may be diminished "by the immense masses of snow that have fallen in many parts of Norrland," which will make it "a matter of considerable trouble and expense to get at the timber." Reports of this sort, though perhaps very intelligible in Sweden, are rather confusing here. If the snow does not come down, or there happens a scanty supply of it, the trade is accustomed to hear great lamentations over the unfavorable state of the forests for logging purposes; but here we have an account of plenty of snow, which is represented as a serious impediment to the delivery of the timber. Offsetting one argument by the other, readers will be apt to consider them like negative quantities in algebra, which represent next to nothing. Snow, however, may be very useful, like brandy and water, to a certain extent, but to much of it is found to be worse than none at all.

In this short analysis of the state of the production of wood for exportation in Northern Europe we have endeavored to ascertain the turn that the trade is likely to take at the opening of the coming season, and we imagine that the impression left on the mind of the reader will be that, whatever else may happen, there is no likelihood of any shortage in the customary supply, but on the contrary that it promises to be on a very liberal scale indeed; nor is the state of the stocks in this country so low as to necessitate an early or urgent demand for an increase of them. On the other hand the continental requirements may be much larger than they were last year.

It was very naturally supposed the crisis in Paris last January, consequent on the failure of the Union Generale for such an immense amount of money, would greatly discourage trade in France, and no doubt it did so to a certain extent, but it is a mistake to suppose that money is not still very plentiful among mercantile circles in that country, and the requirements of the timber trade will probably be on a very liberal scale, for nothing is a better test of the state of trade in any realm than its export and import returns, and from these we learn that the value of the latter for the past eleven months ended, exceeded those of last year for the same period by £4,356,920 sterling, and the exports by £5,885,800—clear evidence that France is still enjoying a very considerable measure of commercial prosperity, and that no interruption to the public works authorized by the legislature—and consequently requiring a large supply of foreign timber—is likely to take place.

We intended to glance at the state of the supply in hand on the American side, but have no space left to do so in the present number.—*Timber Trades Journal.*

AN ADMIRALITY SUIT.

In the case of Peter Muntz et al against a certain raft in the United States District Court, libelants, who formed the crew of the steam ferryboat Margaret, sued for salvage services rendered the craft when it got adrift in the river.

The District Court gave libelants judgment and awarded them salvage.

An appeal from this decision was taken to the Circuit Court, and Judge Pardee affirmed the decision.

On the appeal it was urged:

"1. That a raft of timber is not subject to the jurisdiction of the Admirality Court, in the matter of salvage.

"2. That the Margaret was too small and weak to be able to render salvage services to a large craft.

"3. That no salvage services can be allowed compensation when the property is not saved, and that the raft in this case was saved by the large tug-boats and not by the Margaret.

"4, That the services of the Margaret were of no value to the raft."

The court said:

"A few undisputed principles taken from the text-books settles this case.

"Salvage is compensation for maritime services rendered in saving property or rescuing it from impending danger on the sea or on a public navigable river or lake where interstate or foreign commerce is carried on. Maritime Salvage, sec. 67.

"Salvage may be shortly described as an allowance for saving a ship or goods, or both, from the damages of the sea, fire, pirates or enemies,' Jones on Salvage p. 1.

"It is absolutely essential that the salvors should have rendered actual assistance to the vessel in distress.' Jones, supra. p. 4.

"If part of a salvage service is performed by one set of salvors, and the salvage is afterward completed by others the first set are entitled to reward, *pro tanto*, for services they actually rendered, and this, even although the part they took, standing by itself, would not in fact have affected the salvage,' Jones, supra. 9.—*American Lumberman.*

OUR SPRUCE IN ENGLAND.

The London *Timber Trades Journal* says:—Trade in spruce on the west coast of Great Britain may be said to be at a standstill until the turn of the year. Merchants will now be stocktaking, and until they exactly know what they have on hand will be very averse to buying. Both the weather and the Christmas holidays have been against transaction in spruce deals, but at the commencement of the new year we hope to see an improved state of affairs. Merchants are very chary of buying, on account of expecting to pick up great bargains later on, and no doubt, while odd cargoes are dropping in on the market from time to time, it justifies the buyers in holding back from freely purchasing. Cargoes of spruce have been bought in the Liverpool market at equal to £6 17s. 6d. cost, freight, and insurance, and although the deals are from Nova Scotia, and may not satisfy merchants in quality as well as if they were St. John or Miramichi, still they do not fall far short of these; indeed, we have seen Nova Scotian cargoes equal to any from St. John or Miramichi, and if the shipment from these latter ports in late years are any criterion, we unhesitatingly affirm, compared with former times, the character of these shipments is deteriorating on the whole. So that between an ordinary Nova Scotian cargo and one from St. John or Miramichi there is not a great difference in quality. When spruce deal cargoes can be bought on this side at or under £7 cost, freight, and insurance, there is not much occasion for merchants or importers to hesitate, as at this figure it is generally safe to stock. The cost of producing deals in Canada is yearly increasing, and when we come to consider that a £7 cost, freight, and insurance sale means the cost of the deals and insurance being put at £4, leaving £3 for freight, it will be seen there is not much in this price for the shipper. We question if at this figure spruce deals are not produced at a loss, and we are therefore unable to comprehend how merchants on this side can expect to see prices any lower.

These Nova Scotian cargoes recently sold at Liverpool cannot but have brought a loss to those interested in them. When we take into account the freights lately paid for removing fall stock, with the high rates of insurance for winter risks, £6 17s. 6d. must have left a smart loss. It is rumoured that these low scales are in consequence of the cargoes having belonged to shippers in Liverpool reported in difficulties a couple of months back, and forced on the market by those having advanced against them, in which case the sales are hardly a fair test of what the market is.

TRESPASSING.

An Ottawa correspondent of the *Northwestern Lumberman* says:—This winter seems to be a particularly unfortunate one for operators in the woods in one respect, namely: trespassing on one another's limits. As many of the bounderies between limits have never been run in the field, it is almost impossible to avoid trespassing, more or less, and if limit holders would only adopt the principle of arbitration in cases of trespass, it would be better for all concerned, but it seems that when a trespass is perpetrated, it is always on a pet reserve, where the timber is much more valuable than on any other part of the limit; and when asked what sum will be accepted in compensation, either a demand is made for an equal number of trees which would make a square timber of 100 feet average, or a price is frequently put on a few hundred trees which is actually more than would have been accepted for the whole limit before the trespass took place. Neither of these demands being acceded to, they go to law: both parties spend $5,000 or $6,000 uselessly: the trespasser pays a trifle more than the first offer, and the party whose limit was trespassed upon, after he pays his lawyer and other incidental expenses, gets little or nothing for his timber. It seems strange that a body of such shrewd men as our lumbermen are, have not devised some easy, inexpensive method of deciding such cases, and thus save themselves large and useless expense, besides exposing the inward working of their business; but it is to be hoped that the time is at hand when measures will be adopted to remedy this unsatisfactory state of affairs, and that the decision of such claims for damages will be taken out of the hands of a jury composed frequently of men unable to appreciate the importance of the cases brought before them, and left to the unbiased judgment of honorable men engaged in the trade, who would make the fittest judges of what would, under the circumstances, be fair compensation for injury caused by cutting over limit lines.

INFORMATION ABOUT SAWS.

On few points connected with wood conversion is there more difference of opinion than the question of speeds. Commencing first with circular saws for ripping, for sawing soft and medium woods, a speed of 9,000 feet traverse per minute at the points of the teeth may be taken as a standard speed; if hardwood has to be sawn this should be reduced to about 7,500 feet per minute, and with very hard wood 6,000 feet per minute will be found sufficient. The shape, number, pitch and set of the saw teeth being modified to suit the nature of the wood.

In one experiment I put a circular saw, 30 inch diameter and 12 gauge, on a spindle and gradually increased the speed to between 12,000 feet and 13,000 feet per minute, when it became wavy and pliant and ran out of truth. It therefore follows that, not only is the extra speed entirely unnecessary, but it is positively detrimental, as more power is consumed, more heat engendered in the bearings, spindle and saw plate; extra lubrication is therefore required, and the belts deteriorate more rapidly. I should, however, prefer to err on the side of high speeds instead of low, as this necessitates perfect workmanship and finish not always found in these days of so-called "cheap" machinery.

The speed of circular saws for cross-cutting

can be increased with advantage 1,000 feet beyond those used for ripping say, to 10,000 feet per minute. The difference in the cutting action of the two kinds of saw teeth will readily account for the necessity of this increase in speed. In the case of a ripping saw the action is chiefly a splitting one, the saw teeth acting like a series of small wedges, driven into and separating the longitudinal fibres of the wood, while with cross-cutting saws the fibre of the wood has to be severed across the grain, is comparatively unyielding, and the teeth of the saw meet with much more resistance. It is found necessary to make the teeth more upright and more acute or lancet-shaped in their form than for cutting with the grain. Although the subject is one of great interest, time and space forbid extended remarks, and I pass to band saws.

Owing to the improvements in the manufacture of the blades and the machines themselves, the speeds of which it is safe to run band saws has increased considerably of late years. On machines in which the saw wheels are of small diameter, say below 36 inches, and where the arc of contact of the saw on the wheels is necessarily more acute, the speed of the saw blade should not much exceed 4,500 feet per minute. With saw wheels 36-inch diameter this speed may be safely increased up to 6,000 feet per minute; this is, however, on the supposition that the saw blades are of good quality, and that the top saw wheel is mounted elastically, and the machine generally is well designed and made. The proper construction and use of saws involves many important scientific points that are unfortunately much neglected, resulting in an enormous waste of material and power.—*M. Powis Bale in Mechanical World.*

A TOLL TEST.

On December 21st a law suit of considerable interest to lumbermen on the Wisconsin river was decided in Columbia county circuit court, at portage, Wis. It was the case of the Wisconsin River Improvement Company *vs.* John Woodlock, and was brought to recover tolls on 6,000,000 feet of lumber for passing through the improvement made by the company at the various dams, canons, falls and rapids on the river above Stevens Point, and payment was resisted on the ground that works which had been constructed at Grand Father Bull Falls were a damage to the running of logs, rather than a help; and that the improvements were the occasion of the big log jam which occurred at that point in the spring of 1881. Damages were asked for by defendants. The jury, after a short deliberation, returned a verdict giving the plaintiff 5½ cents, instead of 7½ cents, the maximum amount allowed by the charter, and refusing to allow the damages claimed. The suit brought a large number of the prominent lumbermen on the river to testify in the case. Both sides were represented by able counsel. It is claimed by some members of the Improvement Company that the real purpose of the suit was to force a reorganization of the company, by which the system of improvement was to be extended, after other parties were taken in, and the stock of the old company put into the new organization at 30 cents on the dollar.—*Northwestern Lumberman.*

A Sumac Duty.

The Legislature of Virginia desires to encourage the sumac-growing industry, and at its last session adopted a joint resolution asking governmental co-operation to that end. The body recognized the fact that a very large proportion of the uncultivated lands of Virginia naturally produces, in abundance, a fine quality of sumac, the gathering and manufacturing of which already employs considerable labor and capital, while about one-half the sumac used in the United States is produced by the pauper labor of Italy, and imported into this country at the insignificient tariff rate of 10 per centum ad valorem, and believes that the infant industry of the state eminently deserves to be encouraged and protected, to the end that wild and waste lands might be cultivated in the production of sumac, and a flourishing agricultural and manufacturing interest therein be established, as well as that a superior article should thus be obtained. Aid was, therefore, asked in the senate and congress in securing a protective export duty to be levied on all sumac grown or manufactured in foreign countries.—*Northwestern Lumberman.*

Logging Under Difficulties.

Sands and Maxwell, Pentwater, Michigan, write to the *Northwestern Lumberman*: A portion of the land we are logging this season is very rough, its roughness consisting of immense holes (potholes) resembling the imprint of an enormous washbowl being thrust into it, some of which are over 100 feet deep, quite large trees growing in the bottom just nicely showing their tops above. These potholes are so numerous that in many cases only a ridge just wide enough for a road separates them. They are so steep that hauling out with teams is impossible, and there is so much timber in them that hauling with blocks and tackle would be tedious and very expensive. We are now using one of G. S. Warms & Son's hoisting engines, with a 7x10 cylinder, and it works to a charm, making a trip every five minutes with an ordinary stone boat, and hauling two small or medium logs at a time. We have 1,000,000 feet in these places, and have no trouble hauling out logs that scale from 1,024 to 1,225 feet.

Canadian Hardwood.

The *Monetary Times* says:—Referring to our recent article on Canadian hardwoods, Mr. Ouillette, of Amherstburg, Ont., informs us as under: "There is a great deal of Balm timber in Essex county, and a large business is done in it. I myself have from fifteen to twenty million feet of it standing. I manufacture from 1,000,000 to 2,000,000 feet per year in lumber, mostly for the Eastern States, and I also sell a quantity in Canada. We also cut a large quantity of oak annually for car-stuff which is sold chiefly in Canada. A great deal of white and black ash is cut hereabout, and sold in the Dominion and the Eastern States, chiefly in the latter.' From the data given by this exporter we should infer that the outlook in hardwood lumber is very promising for next year.

St. Louis Cooperage.

It is figured that during 1882, St. Louis Mo., and East St. Louis, Ill., reckoned together, consumed about 400,000 tight barrels, manufacturing 250,000 of the amount, the whole representing about 3,500,000 pieces of staves and heading, the year's business showing a slight increase of the previous year. In stock packages, 15.000 flour barrels and 8,000 fruit, potato and bottled beer barrels are daily made and consumed, the average price of these packages being 28 cents. The flour barrel demand is reported to have fallen off, on account of heavy exportation in sacks, while the other packages named were more largely consumed, owing to heavy crops. The general business is in a fairly healthy state. —*Northwestern Lumberman.*

The Isthmus of Darien.

The *American Lumberman* of New Orleans: —A Merchant of this city informs us that a great quantity of Northern lumber and ready made cottages cumber the wharfs of Aspinwall, that thriving city of the Isthmus of Darien. On another page we publish a long account of the mercantile situation on the Isthmus, in which it will be seen that our correspondent predicts a great Isthmian lumber movement during the next year. From the information already received, it would appear that this movement has already begun, and that the lumber dealers of the coast are hastening to take advantage of the great demand for timber of all kinds at Aspinwall.

A Model Building.

THE *American Lumberman*, of New Orleans, says:—When the Mechanics', Dealers' and Lumbermen's Exchange adopt a plan for their new exchange building, we hope they will not forget to specify the using of every variety of wood procurable which can be used for ornamental and practical purposes. Ceilings, wainscots, panels, etc., finished in a variety of beautifully grained and colored woods would present a striking appearance, and do much towards making the exchange building one of the most attractive in the country.

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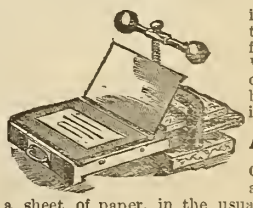
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PETERBOROUGH, Ont. FEB. 1, 1883.

LUMBERMEN say that the snow is about the right depth for successful operations.

G. T. HASKEL & Co., are running a hoop factory at Ludington, Mich., sawing their hoops out of soft elm.

UP to the middle of January the C. N. Nelson Lumber Company, of Duluth, had nearly 20,000,000 feet of logs on the skidways, and the work was being pushed with all possible vigor.

THE *Timber Trades Journal* of Jan. 6, says: Six weeks ago it was thought that lower port spruce might reach £9 per standard at the Liverpool sales, but it has been going back ever since.

THE *Timber Trades Journal* says :—The demand for American walnut is greatly on the increase, and doubtless our readers will have observed how greatly the wood is now-a-days employed for cabinet purposes.

THE River and Streams Bill, twice disallowed by the Dominion authorities, has been reintroduced in the Ontario Legislature, and will undoubtedly be re-enacted. Its provisions must be familiar to our readers.

WILD cherry is a wood for which a large demand is springing up, which must inevitably make it very valuable in the future. It is used principally to supply the place of walnut. It is extremely close-grained and can be very highly polished.

BEGIN to lace a belt in the centre, and take care to keep the ends exactly in line, and to lace both sides with equal tightness. The lacing should not be crossed on the side of the belt that runs next the pulley. Thin but strong laces only should be used.

WE have received the first number of the *American Lumberman*, a new organ of the trade published at New Orleans. It contains a fund of valuable information, and will no doubt be appreciated by the important industry it represents. Its appearance is as creditable as its matter.

JOSEPH JACKSON, a farmer near Centerville, Ind., had a walnut knot on his premises which had grown there, and was supposed to be worthless on account of decay. While the boys were trying to see how much powder would be required to blow it up, a new idea struck the farmer, and he investigated further. The knot was sold for over $200 for shipment to Europe.

The Boston correspondent of the *Northwestern Lumberman* says :—Several vessels are now loading for South America, and one for San Francisco. The latter has taken on board a large amount of very fine walnut, ash, and oak. Considerable pine has also been shipped ; and there are now several lots of walnut and poplar on the docks awaiting shipment to Liverpool.

THE Ohio State Forestry Association has organized at Cincinnati. At a meeting January 13, the following officers were elected : Honorary President, John A. Warder ; Acting President, Warren Higley ; Vice Presidents, Durbin Ward, Charles Reemlin, Horace Wilson, of Columbia, Ohio ; Secretary, A. Leve ; Treasurer, J. H. McMackin. Meeting are to be held quarterly.

THE addition of resin to the tallow for belts used in damp or wet places, will be of service and help preserve their strength. Belts which have become hard and dry should have an application of nert's-foot or liver oil, mixed with a small quantity of resin ; this prevents the oil from injuring the belt and helps preserve it. There should be so much resin as to leave the belt sticky.

THE Marquette *Mining Journal* says :—The pine lands of the upper pensinula are being rapidly sold off, hardly a week passing without some sale of this kind being reported. The largest noted this week is that made by J. M. Longyear for the canal company, the tract disposed of consisting of some 1,700 acres of land located in township 42, range 33, the consideration being nearly $100,000. The purchasers were Detroit parties.

THE *Northwestern Lumberman* says :—The operators of the northwest have not only got their faces set in the direction of the splendid forests of the South, but many of them are throwing their hooks out in the direction of Puget Sound. Many inquiries have been made recently of the *Lumberman* regarding the timber resources of the Sound district, the facilities for lumbering, etc., and not many years will pass before some of the cash and experience of the Northwestern states will be brought into requisition on the Pacific coast.

THE amount of white pine lumber exported from the port of New York, as reported by the Export Lumber Company, for the years named is as follows :—

	Feet.
1877	47,314,000
1878	42,695,000
1879	45,861,000
1880	52,628,000
1881	70,781,000
1882	57,540,000
Total for six years	306,819,000

THE *Northwestern Lumberman* says :—The steamship Tangier, which is running for a Quebec lumber house, under the mangement of Shadbolt & Co., of New York and London, has been the cause of negotiations between the English and Spanish Governments. Her captain was arrested in Spain, but according to the accounts which have yet reaohed us, he was not so much in fault as the Spanish custom house officials, who appear to have fired on this British vessel on very slight provocation, and the fact of the same commander now bringing her to Philadelphia indicates that the crime could not have been great, or the "Dons" would still have him in durance vile. Owing to the difficulty in obtaining sailing ships, steamers are now coming into use for timber freight by firms whose trade is sufficiently large to admit of their employment. Handy little sailing vessels should pay well, with timber freights as they stand at present.

WHITE, FRIANT & Co., of Grand Haven, have lighted up their lumber woods at Six Lakes with street lamps. They have two camps employing 165 men and forty horses. They draw their logs with an engine and cars and put in 125,000 to 150,000 every twelve hours. They expect to put in 31,000,000 feet.

THE Chicago *Northwestern Lumberman* says : Many of the largest manufacturers do not hesitate to say that in their opinion lumber will rule lower in 1883 than in 1882. They base their belief on the fact that there is an immense stock of lumber in the country, and that the present logging season promises to be a very successful one in every direction.

THE *Lumberman's Gazette* says :—The man who can concoct some method of falling a pine tree without the necessity of the enormous amount of manual labor which is at present expended in that direction would not only confer a blessing on humanity, but would reap a harvest that would enable him to take rank among the millionaires of the country. His position in the world, in fact, would be more enviable than that of the editor of a daily paper.

THE Duluth *Lake Superior News* says :—McGuire & Wentworth have fifty men at work in their lumber camps on Rainy River, and a gentlemen who recently visited them, says that they have the model camps in that region. They are having good lumbering weather in that country and unless there is a sudden change, they will get out all they estimated at the commencement of the season—about eight million feet. These logs will be sawed for the Winnipeg market.

TREE PLANTING.

In the Ontario Legislature Mr. Wood moved that the treasurer of the Province, upon receiving a copy of the inspector's report, certified by the reeve and clerk, shall recoup to the treasurer of the municipality one-half of the sum paid by the township, under authority of the municipality under the act to encourage tree planting, the said copy to be forwarded on or before the first day of November in each year ; that the sum of $50,000 is hereby apportioned and set apart for the object, and shall be known as the Ontario tree planting fund. He declared that the Government had long taken a great interest in the question, and had sent delegates to recent forestry congresses and they had submitted reports and recommendations to the Government. The bill provided that 25 cents would be paid for every tree that had been planted three years, the amount to be handed over by the municipalities and one-half repaid by the Government.

Mr. Meredith asked whether the sums would be paid at once, or in three years hence.

Mr. Wood replied only three years hence.

The resolution was passed.

FOREST COMMISSIONERS.

The *Lumberman's Gazette*, of Bay City, Michigan, says :—Forest protection is being considered by each of the states, and the interest in this direction is having a steady growth. Vermont has sot an example to her sister states, by which it will be well for them to profit, by the appointment of two commissioners who are expected to devise measures to protect the forests of that state as well as to suggest means to replant those which had already been cut away. Throughout the new England states, says the Williamsport *Gazette*, there are, as is well known, large areas of territory that are so sterile as to be unfit for the ordinary purposes of agriculture. These could be planted with forest trees at a comparatively small expense, and would in time not only have a most beneficial result upon the water courses of the country, but become a direct source of profit to the individual proprietors besides. Pennsylvania has not so much sterile surface, comparatively, as the New England states, but there are, nevertheless, many thousand acres where a careful system of forest tree culture would prove valuable to the state and profitable to the individual owners. In fact, the plan pursued in Vermont commends itself strongly to every member of the Union. Sooner or later they will all follow her example, but it is highly important they should go to work now, and not put off the time until dire necessity compels us to take it up.

THE CLYDE TRADE.

Singleton, Dunn & Co.'s Timber Circular of of Glasgow, dated 4th January, gives a lengthy review of business during the past year. It says :—"During 1882 business was fair, and prices generally well maintained. The imports were about an average in quantity all over, but it it is noteworthy that a very large proportion of these were after September. At the end of that month it was ascertained that stocks were smaller than usual and in consequence goods were sent forward in such quantities at high rates of freight and insurance as leaves the aggregate stocks at the close of the year similar to those of the preceding year.

Trade generally was steady, and shipbuilding was unusually brisk. This import and industry will bo as fully employed in this year as in the past one—most of the yards having orders on hand to occupy them for a year at least. Housebuilding has not improved—if, indeed, it is not worse now than for the last twenty years.

Case making, owing to the large exports, has formed a large medium of consumption, and there are indications that this trade will be pretty active during the spring.

We again refer to the competition Quebec woods have to contend with in pitch pine and North of Europe woods imported direct and to east coast ports for consumption in Clyde districts. In volume these two classes of timber far exceed the total imports from Canada to Clyde.

Square white pine is very low in stock ; but this is due only to the unusually big demand for ship work. It is almost exclusively prime qualities that are taken by the shipbuilders, and it is the experience of the trade that the commoner qualities are unsaleable at rates to clear foreign invoices. In fact for rough carpenter work it is only now and again that contractors use it—finding suitable substitutes in the cheaper woods from north of Europe and the pitch pine ports.

Deals.—Those from Baltic districts have thoroughout the year been distinctly under the prices for Canadian, hence the difficulty in obtaining anything like renumerative rates for the latter. Of course, this applies to whitewood or spruce. Our experience is that in case making, where formerly the consumption was of pine only, it is now very much a matter of price as to whether pine or spruce shall be used. This acts most detrimentally on the lower qualities of Canadian pine. In times when housebuilding is active 3rd quality pine are largely used ; but in the present condition of things the foregoing remarks explain the slow sale and low values now ruling. Contracting in Quebec goods was on a restricted scale all last season, and we do not anticipate much improvement this season.

Freights.—In the spring from Quebec rates opened at 24s., receding to 22s. Then in midsummer and fall beginning at 24s., rates went to 28s., and a few ships at 30s. Deals from Quebec per steamers opened at 60s, receding to 52s. 6d. to 55s., latterly picking up to 80s. From the lower ports sailing vessels ruled at 60s. to 65s., at the closing going up to 77s. 6d. Steamers from St. John and Miramichi were plentiful in the early part of the season at 50s. to 55s., springing at the close to as high as 82s. 6d.

White Pine.—The stock is small, and firmly held. The consumption is below that of the previous year. Prime deck plank wood brought to 2s. 5d. for 60 feet average, and 2s. 7d. for 70 feet average at the beginning of the season, rising gradually till, at the close of the year, prices stand at 2s. 7d. to 2s. 9d. per cubic foot.

Deals.—The imports from Quebec were over those of the previous year, while from New Brunswick and other lower ports they were less than the previous years. Taken all over the consumption of deals was about an average. Quebec Yellow pine, 1st quality—Prices early last year were similar to those ruling at the close of 1881.

SOUTHERN TIMBER SUPPLY.

The southern pine belt, running through nine States, is believed to have contained, at the end of the census year, not less than 25,000,000,000 of feet of merchantable pine, or enough to last, at the rate of consumption of that year, 250 years. The value of this great body of timber is enormous, and must have an important influence in developing the material prosperity of the south.

The study of the actual condition of our forests indicates important commercial changes which may be expected to grow out of the changing conditions of the lumber trade. New Orleans seems destined at no distant day to become one of the greatest lumber distributing and manufacturing centres of the world. Its position with reference to vast forests, its commercial importance, and the ease with which logs may reach it by river and lake, point to this conclusion. A great deal of northern capital has been invested during the last few months in southern pine fields, and the number of persons seeking such investments is increasing. The best informed northern lumbermen realize at last that the time has come when they must seek new fields for their operations, or abandon the business entirely. These men are getting ready to move their mills, capital and energy into the south; and their attention is naturally directed to the Gulf states. * * *

The demand for southern pine for northern consumption and export is rapidly increasing also, and the country must not make the mistake, which it made first in regard to the pine supply of Pennsylvania and Michigan, and which the Californians are now making in regard to their redwood, and conclude that because the northern states contain vast quantities of pine, the supply will last forever. No forest is inexhaustible if nothing is done to protect or perpetuate it. The recklessness which has marked the management of forest property at the north has not been wanting in the south. The southern pine forest, as it stands to-day, is mature throughout and ready for the axe.—*The Nation.*

THE MURRAY CANAL.

The Ottawa correspondent of the Toronto *Globe*, under date Jan. 26th, says:—Mr. John White, M. P., for East Hastings, went west to-night. His visit to the city was in connection with certain alterations which he is anxious to have made in the contract for the Murray canal. He had an interview with the Minister of Railways to-day, and recommended that instead of allowing the Priuce Edward Railway Company's bridge to swing from an abutment in the middle of the canal the bridge shall be constructed in two sections swinging from each shore. The bank of the canal is also to be faced with stone, commencing eight feet from the bottom to a height of eight feet. Sir Charles Tupper agreed to adopt Mr. White's suggestions, and has sent for Mr. Rubidge, Chief Engineer of the work, to explain the required changes in the specification. The removal of the abatment from the centre of the canal is to admit of timber cribs from the upper lakes being floated through, thus avoiding the dangerous navigation of the Prince Edward coast. Mr. White states that all reports of difficulties in the way of constructing the canal by the Presqu'Ile route are wholly unfounded. No rock or quicksands have been encountered, and the contractors are well satisfied with the character of the undertaking. The lowest depth of water will be eleven feet, and the average from twelve to sixteen feet. The estimated cost of the entire six miles of canal is $800,000. The canal will be free, as there are no locks. A vote of $200,000 to continue the work will be asked for at the coming session.

DESTRUCTION OF FORESTS.

The question of admitting Canadian lumber into the United States is creating not a little discussion at Washington just now. The New York *Sun* regrets that some of the representatives of Michigan are much excited at the proposal to admit Canadian lumber free of duty, by way of preserving a little longer the pine forests of that state. Our contemporary then goes on to observe that "the speedy destruction of the forests of Michigan will prove a calamity of which its present members of Congress appear to have no adequate conception. These forests can never be reproduced, and it is the part of wisdom to preserve them. By judiciously and gradually thinning them out, they may be made to last for ages, and yet furnish as much lumber as is necessary for the use of the people. On the other hand, by destroying them at once a few lumber speculators may get rich, but the state will be permanently impoverished." These words apply to Canada just as strongly as the States, and are worthy of the careful attention of our legislators. At the same time it is the part of wisdom to make the forests productive of revenue by judicious sales, so that large private interests may unite with the government in preventing those periodical fires which have devastated so much valuable timber land. Proper regulations for the thinning out of the forests and for prevention of fires are what are most urgently required.—*Ottawa Free Press.*

MIDLAND, ONT.

The *Free Press* says:—The correct estimate of Dollar's mill has been made with very satisfactory results. From the 20th of May, the time the mill started, until the day it shut down, December 29th, the average output was 30,509 feet of lumber per day. If there is another single circular mill on these waters that has done work anything like this, let us hear from it. Mr. George Ross, foreman, has commenced to repair the mill, and every thing will be in first class order to commence next season's work. Chew Bros. are delivering at their mill a very fine sample of logs, to be manufactured into lumber as soon as spring opens. They expect to make an early start at their mill next spring. They are getting a large quantity of logs in a convenient position so that they can begin as soon as the ice breaks up.

Red River Timber.

We find the following account of the timber of the Red River Valley in the Emerson *International's* description of that region:—Fifteen miles east of the Red River at Emerson the line of continuous forest is reached—woods of almost impenetrable thickness, comprising all the varieties of the Lake Superior region. West of the Red River to the Pembina Mountain the various streams which drain this region sustain a fine growth of oak, poplar, elm, cotton-wood and the ash-leaved maple, Southern Manitoba being much more heavily timbered than the central or northern portion. Timber culture on the prairie is already carried on to a considerable extent, and in a few years quite a large quantity will be raised on "Tree Claims."

Drought in New England.

A serious drought has prevailed in New England since midsummer, with the exception of one storm in September. The consequence is that the streams and lakes are dried up, and hundreds of mills and manufacturing establishments are deprived of power to run. The effect of the drought was felt all the fall by the saw-mill interest, especially in New Hampshire and Maine, and, to some extent, in Vermont and northern New York. On account of the frequent recurrence of drought in northern New England, steam is being largely substituted for water power.—*Northwestern Lumberman.*

Why Called Pig Iron.

When iron is melted it runs off into a channel called a sow, the lateral branches of which are called pigs; here the iron cools, and is called pig iron. This is merc play upon the word sow. Now *sow* has nothing whatever to do with swine, but is taken from the Saxon *sawan*, to scatter, German *sausen*, to rush; and ought to be written *sous* (sows), a word in use still in the expression, "He soused upon him," i. e., swooped or rushed. Having sows or sow for the parent channel, it required no great effort of wit to make the lateral grooves the little pig.

A CHARTER is to be applied for on behalf of the New Glasgow Lumber company, with headquarters at New Glasgow, Que., capital stock to be $50,000 in shares of $100. Joseph Clarkson, Robert Clarkson, John Crediford, T. J. Claxton and F. J. Claxton, are to be the first directors.

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

25 in ball and 5 in heel are the numbers usually required.

☞PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

T. McAVITY & SONS,

Dealers in Lumber and Mill Supplies,

ST. JOHN'S, N.B.

3L6

JUDGE LAIRD, of Prince Arthur's Landing, being in Toronto, informed a *Globe* reporter that a heavy shipping and lumber trade is looked for at Prince Arthur's during the coming summer. In alluding to this Judge Laird remarked that "owing to its geographical position Prince Arthur's for at least seven months in the year is the commercial fulcrum upon which will swing the chief interchanging trade of the Dominion. Of necessity it becomes the great entrepot for the wares of the Eastern Provinces passing westward, and for the produce of the vast western country seeking outlet to the eastward."

Wanted.

A PARTNER that understands the SAW MILLING BUSINESS, with capital. For information address JAMES B. DICKSON, Pembroke, Ont. 21L6

FOR SALE!

The MURRAY BAY LIMITS

COMPRISING ABOUT

330 SQUARE MILES.

These limits control the whole territory on the Murray River. The limits are very valuable, heavily timbered with Spruce and Pine, interspersed with valuable hard woods, Poplar and White Birch. Apply to

D. C. THOMSON,

4L3 QUEBEC.

FOR SALE.

ONE ROTARY

SAW CARRIAGE,

Saw and Saw-Sash Complete.

APPLY TO

THOMAS LAMONT,

2L2 DOUGLASTOWN, N.B.

MINNESOTA

PINE LANDS

FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF

8,000 ACRES

Of PINE LANDS, in St. Louis County, Minnesota, carefully selected and estimated to cut FORTY MILLION FEET, well located on good driving stream, tributary to Duluth.

A. McCALL,

6L1 Lumber Merchant, Simcoe, Ont.

320 ACRES FREE

IN THE

Devil's Lake, Turtle Mountain And Mouse River Country,

NORTH DAKOTA,

Tributary to the United States Land Office at

CRAND FORKS, DAKOTA.

SECTIONAL MAP and FULL particulars mailed FREE to any address by

H. F. McNALLY,

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2m 28 E. Front Street, Toronto. L2w2

PUBLIC NOTICE

TRADE MARKS.

TESTED

Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

And Beam Engine Marks.

It having come to the knowledge of Messrs. Thomas Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of ◇J◇ and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.

Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,

EAST PARADE,

SHEFFIELD, ENGLAND,

Solicitors to the said 6L2

THOMAS JOWITT & SONS

17 YEARS' EXPERIENCE.

HOWIE'S DETECTIVE AGENCY

OFFICES, 32 KING STREET EAST,

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All legitimate Detective business attended to for Banks, Fire and Life Insurance Co's, also for private parties. This agency does not operate for reward. 1yL5

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily, and honorably. Address TRUE & Co., Augusta, Maine.

ROADSIDE TREES.

We take the following from the report of the Fruit Growers' Association of Ontario:—

The next topic was "What are the best trees for country roadside planting?"

Mr. BEADLE.—I would suggest that one of the prettiest trees for roadside planting is the rock elm. Of course the roads must not be too narrow where those trees are planted, or the trees be planted too thickly, because they will shade quite a space. I would also mention besides that our own white ash. If the trees should happen to be planted too thickly, so that it will be necessary to take some of them out, the wood will be worth all that the trees have cost.

Mr. BUCKE.—I would suggest the black walnut, providing it is planted in great number, so that the boys should not break them all down to get the nuts; also the maple. In fact, excepting the soft wood trees, I do not know of any tree that would not be suitable for a roadside tree.

Mr. HONSBERGER.—I like for a country roadside tree the Norway spruce, and then between them, at a nice distanco for a walk, plant the soft maple.

Mr. BUCKE.—I think the Norway spruce would be apt to make drifts in the winter time, if there should be much snow.

Mr. HONSBERGER.—A person would naturally think so, but I can say that I am very fortunately disappointed in that myself. I have planted them by the roadside, both running north and south, and running east and west, and they are not liable to cause the snow to drift.

Mr. DRURY.—We plant maples in our part, on account of their assuming such a beautiful shape in a few years. We also plant the spruce and the white pine.

Mr. BUCKE.—The great trouble in planting roadside trees is the cattle. Until we can get some law passed to prevent cattlo running at large, it is difficult to prevent the cattle rubbing them down. I look upon the subject of tree planting as depending entirely on the cattle question.

Mr. DEMPSEY.—I fully endorse what the secretary says respecting tho elm. In some of the Eastern States they use the elm, and they are certainly all that we need desire for a roadside tree. I have seen the white bark birch planted on the roadsides. It certainly is a very pretty tree—attains a very graceful and beautiful form, and I think it is much prettier than the maple, particularly the hard maple. The soft maple makes a rapid growth, and it is a very pretty tree for the roadside. Where the black walnut grows alone it appears to attain too much of a spreading habit. I presume it could be trimmed up. Speaking of the elm again, I believe that on the front of Sydney, in the county of Hastings, they have one shade tree in a distance of about twelve miles. They deserve thanks for leaving that. That elm spreads farther than the width of the room, and I have driven under it frequently when I have been out on that road in the summer—it is a very hot road—and I have enjoyed a rest there very much. And I presume my horse has enjoyed it more than I have. Any one who has ever stopped to rest in the shade of a tree like that can certainly appreciate the value of the elm.

Mr. DRURY.—There is no doubt that in the absence of a stock law in this country the planting of trees on the roadside will be very rare indeed. As a matter of fact, if one municipality takes a stand against cattle running at large, the adjoining municipality may not take the same view of it. And in that way the measure of the first municipality may be rendered abortive. In our part of the country we have a few very nice drives, that have been made by a little care in the clearing up, by parties taking the trouble to throw the brush back and leave the trees in a line. Speaking of the country as a whole, it is almost impossible to say what tree is the best for roadside planting. I think we must first have a stock law, and than I believe there will be a desire on the part of municipalities, as well as on the part of individuals, to beautify our roads by planting trees.

MR. PAGE.—I prefer for the roadside either elm or maple; but, as has been said by former speakers, it is useless to talk about planting shade trees on the roadside while the cattle are running at large.

MR. GOTT.—There are three or four kinds of maple that are very valuable. The only objection to planting it is that the roots spread so far in the soil. But it is a very beautiful tree. Our basswood tree for roadside planting is not only ornamented but useful. The chestnut tree would also make a very beautiful shade tree. It is both useful and ornamental likewise. So also is the hickory. The Lombardy poplar and the ironwood tree are beautiful trees for our roadsides.

MIRAMICHI TRADE.

Mr. J. B. Snowball's Miramichi wood trade circular for the year 1882, is as follows:—

CHATHAM, MIRAMICHI, January 2nd 1883.

The cost of logs during the past season was about an average, and all were brought to market, but the brook driving was slow and expensive, so that the stocks stood in the market at a high first cost, and prices were stiffly maintained by holders during the season.

The fluctuations and unexpected advance in the freight market were important features of the season's business. Early charters of sailing vessels were made at 61s. 3d., but at the opening of navigation steam tonnage offered freely and accepted rates as low as 52s. 6d. This had the effect of inducing the better class of sailing vessels to go on long voyages, making fall tonnage scarce. Rates began to advance rapidly in August, and 82s. 6d. was reached before the close of the season.

Although the price of deals in the English markets fluctuated during the year from £7 to £8 12s. 6d., still prices on this side were steadily maintained, and neither deals nor logs at any time, sympathised with any of the changes, showing that producers not only had confidence in the market, but that their stocks, having cost prices equal to tho highest quotations, they would hold over rather than make any concession in price.

The export business not only of this port, but of the Province, is gradully concentrating into fewer hands, which, to some extent, accounts for the steady price of New Brunswick goods.

Seeing that the Nova Scotia exports, although small, play an important part in the fluctuations of the British markets, I have procured a return of them for this issue. Though, perhaps, not fully complete, it shows approximately the export of that Province. There are many creeks in Nova Scotia from which a cargo or two are shipped, but these places being outports the shipments are credited to the nearest port of entry, and, in some cases, these ports are on the opposite side of tho Province from that where the entries would indicate that the shipments were made.

The stocks wintered will aggregate, in round and sawn woods, 35 millions sup. ft. against 33 million last year, 16 millions in 1880 and 70 millions in 1879.

The shipments for the past five years were as follows:—

1877—150	Millions	superficial	feet.
1878—106	"	"	"
1879—114	"	"	"
1880—155	"	"	"
1881—128	"	"	"
1882—117	"	"	"

NORTHWESTERN LUMBERING.

Tho Selkirk *Herald* says:—Mr. E. F. Rutherford, of the firm of Drake & Rutherford, of this town, came in on Saturday last from his firm's timber limit on Fisher River. He and one of his men travelled in company, and they had Indians, with dog-team, to carry their luggage. They walked all the way, a distance of 120 miles, the thermometer one night registering 40° below zero. They had to camp out one night, and passed the time very uncomfortably. They kept up a huge fire, which, however, scorched their faces while their backs felt the frost keenly. Mr. Rutherford was four days on the road, and he will not forget his experince for some time.

The firm of Drake & Rutherford have a claim at Fisher River forty miles in exteut, and on it they have a double circular sam mill. They intend hauling sufficient logs this winter to supply 4,000,000 feet of lumber. They have seventy men at work in their camp and as their haul is a short one they expect to make very good progress. It will take five years at least to take all the lumber off the claim. The principal timber is tamarac and spruce of good quality. Mr. Rutherford states that all their lumber will be transhipped at Selkirk, and he hopes that the Selkirk branch of the C. P. R. will be completed in time for the opening of navigation next spring. He thinks that very little lumber, if any, will be taken up to Winnipeg by boat once the Selkirk railway is open.

Mr. Rutherford has gone to Stonewall, and will on his return from that place go to visit friends at Millbank, Ontario. He will return in March.

MAINE TAMARAC.

A correspondent from Bangor, Me., writes as follows to the *Northwestern Lumberman*:—Tamarack, more commonly known here as hackmatack or juniper, grows on wet land, mixed with other woods, cedar mostly. On some tracts second-growth juniper is about all there is. On such tracts quite an extensive business is done in cutting ship knees, the largest root being dug out to form the short arm of the knee. The body of the tree has little value for timber, as it is "churn-butted." The growth of such timber is rapid, the grains measuring from one-eighth to three-eighths of an inch. Some of the second growth is very thick and the trees tall, with few limbs, and of little value except for wood when near a market. The old growth is much more scarce, and the stumpage as valuable as our best pine. It is used for ship frames, the patterns being taken into the woods and the frame shaped by hewing—"moulding a frame," it is termed. It beings from $2 to $3 per ton stumpage (40 cubic feet), and is worth from $16 to $20 per ton at the ship yard. This old growth is seldom found in large quantities, like spruce or pine, but scattered with other kinds. On remote lands the logs are sided, driven to the boom and moulded at the yards. The timber is about as heavy birch, and considerable of it would sink if not sided. The largest stick I ever saw scaled 3,500 feet, but it would be a fine lot that would average 200 feet. For strength, solidity, durability and "slivering" it is about equal to the best hard pine. It is used to quite an extent for railroad sleepers. It is not as durable but holds a spike better than cedar, and is much used on curves and switches. I have never known of its being used for shingles, nor of the bark being put to any use.

There are from 20 to 30 inches of snow in the woods on our waters, with perfect weather for logging.

MONTREAL NOTES.

The Montreal *Gazette* of Jan. 16, says:—There is already an inquiry in this market for spring shipments of pine for the American markets, several buyers from New York and Albany having recently been in this city for the purpose of anticipating their future requirements. There is also an American demand for ash for immediate delivery at full prices. Stocks here are generally well assorted, a fair local consumptive demand is reported, and dealers look forward to the spring trade with a good deal of confidence. One of our leading dealers, who has recently returned from New York, says that notwithstanding the anticipated large supply of logs this season, it is expected the United States markets will need all of it. Private advices from Ottawa state that Americans are looking after their spring supplies of lumber in that market also.

THE REASON OF IT.

The *Lumberman* of Dec. 23, made mention of a badly acting tramway at Elmhurst, Wis. Mr. E. P. Cowles, of that place, wishing it to be known why the road has not been a complete success, writes as follows: The road was built for the purpose of running lumber out to Elmhurst in the fall, and logs back to the mill in the spring, with the intention of suspending operations in the winter. Owing to a delay of two months in getting the engine out, it was not on the ground until November, when it was found that the track was unfit for use. Through lack of experience and judgment on the part of the builders, it was laid with no adequate foundation. The rails were not pinned or secured in any manner. Stumps and obstructions were left inside the track which interfered with and broke the machinery. Six weeks were consumed in repairing the track in a hasty and imperfect manner which brought the starting up in the bad weather of December with no preparations whatever for running in winter, and the track in no condition to work at this season of the year. When lumbermen learn to build pole roads with the same care and in the thorough manner that other roads are built, and pay proper attention to laying out and grading, they will be found to be thoroughly efficient and serviceable.——*Northwestern Lumberman.*

REPAIR THE RUIN.

The necessities of their situation have aroused the people of some of our western states to action. In Kansas, Nebraska and other states liberal premiums have been offered for the encouragement of tree planting, and already in many portions of the prairie region a perceptible change has taken place, and the eye no longer wanders over great spaces without sight of shrub or tree. Minnesota has her Forestry Association, and its secretary reports that between seven and ten millions of trees were planted in that state during the years 1877, of which more than half a million were planted in a single day, "Arbor Day," as it was called, or tree-planting day, the first day of May having been fixed as the day, and every owner of land invited to devote the day especially to the planting of trees. Efforts have been made in other states which are similiarly situated in respect to a supply of forest trees. The great railway companies, whose roads stretch across the treeless prairies, have become in some instances large planters of trees, feeling the need of them, both as screens from the Rocky Mountains and as a source of supply for the ties which are constantly needing renewal.—*Lumberman's Gazette.*

The Oak and the Orange.

From an acorn weighing a few grains a tree will grow for 100 years or more, not only throwing off many pounds of leaves every year, but itself weighing many tons. If an orange twig is put in a large box of earth, and that earth is weighed when the twig becomes a tree, bearing luscious fruit, there will be nearly the same amount of earth. From careful experiments made by different scientific men, it is an ascertained fact that a large part of the growth of a tree is derived from the sun, from the air and from the water, and a very little from the earth; and notably all vegetation becomes sickly unless it is freely exposed to sunshine. Wood and coal are but condensed sunshine, which contain three important elements, equally essential in both vegetation and animal life—magnesia, lime and iron. It is the iron in the blood which gives them the durability necessary to bodily vigor, while the magnesia is important to all the tissues. Thus it is that the more persons are out of doors the more healthy and vigorous they are, and the longer they will live. Every human being should have an hour or two of it, and in the early forenoon in summer.

Letter from Member of Congress.

HOUSE OF REPRESENTATIVES,
Washington, D.C., Feb. 19, '82.

GENTLEMEN,—Inclosed find $1, and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a bad cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GROUT.

LITTLE BY LITTLE.—The constant dropping of water will wear away even the hardest stone. So the constant irritation of a cough will so wear upon the lungs as to induce incurable Consumption. Hagyard's Pectoral Balsam will cure the worst cough, speedily and effectually.

WALTER LINTON, of Waterloo, writes that Hagyard's Yellow Oil has done great good in his family, his wife being cured of Callouse lumps that other medicines failed to remove, he he also states that a neighbor was promptly relieved of Rheumatism by the same remedy.

WORTH KNOWING.—A Fact Worth Knowing. The best household remedy known for Coughs, Colds, Bronchitis, Asthma, Whooping Cough and all throat and chest troubles tending toward Pulmonary Consumption is Hagyard's Pectoral Balsam, to be procured of any druggist.

JOINERY FOR ENGLAND.

The London *Timber Trades Journal* says:—With respect to the trade in joinery that has been referred to in these columns as likely to be conducted on an extensive scale between this country and America, we observe in the pages of one of the leading lumber journals of the United States only a passing notice is given to the subject, no particulars are mentioned, and the paper in question refers to it more in the light of intelligence emanating from our side than as something with which they were immediately concerned. We may, therefore, safely assume that, whatever shape this new competition takes, it will be conducted on a very small scale; otherwise the trade journals of the United States would certainly have given us some information about it. For some years past what are termed "Yankee notions" have been arriving in steamers from New York, but the joinery they bring is of such little account in the timber trade that the prices of the articles so exported are not quoted even in their own journals. These nick-nacks are probably shipped intermittently on venture at a reduced rate of freight as broken stowage, and form no particular branch of the wood trade; certainly not of sufficient importance to cause our Swedish friends any uneasiness, or to rouse the joinery trade up in self-defence.

Liverpool Prices.

The London *Timber Trades Journal* says:—Anent the wood trade of Liverpool—judging of affairs from this distance, and from various reports which have from time to time reached us, and from other circumstance—we should say that in the one item of spruce deals the business is generally done at too fine a rate of profit to pay. Referring to the commercial habits of the Hollanders, a statesman—we believe it was the late Lord Palmerston—once remarked that:—

"In matters of commerce the fault of the Dutch
Was in giving too little and asking too much."

It might be well, if without earning a similar reputation, our Liverpool friends could combine to secure at leat a fair working profit, and one sufficiently large to cover the attendant risks of business. We believe that we are correct and fully justified in saying that at no other port in the country is the wood trade done at such a narrow margin of profit as at Liverpool.

The Dismal Swamp.

A recent visitor to the Dismal Swamp in Virginia found it much reduced in extent compared to what it was twenty years ago. It now contains some of the best farming land in the state. A railway runs across it, and it is on its way to final extinction. The drainage of the Lake Drummond, a central body of water lying higher than the average level of the swamp, would make the whole area fertile. This is a project of Gov, Benjamin F. Butler, who once had had surveys made, but at length abandoned it. The great industry of the swamp is lumbering. It is penetrated by small ditches in connection with larger canals, and by rude tramroads, over which the logs are hauled to be sawed into shingles, railway ties and fencing. The lake itself, however, with its almost impenetrable fringe of cypress and its projecting roots and broken stumps, is quite as dismal as ever.—*American Lumberman.*

Quality of Pine Deals.

The London *Timber Trades Journal* says:—In respect to Quebec pine deals we are continually hearing something of superior 3rd quality. We are not aware whether these deals are a shipper's brack or an importer's manufacture, but the circumstance appears to open out the important consideration as to whether there does not exist too great a margin in cost betwixt ordinary 3rd and 2nd quality pine deals. Unusally this margin approaches in extent to £4 10s. or £5 per standard, and it might well seem that an intermediate quality is desirable, and would meet with a ready market.

A HORSE disease is causing some excitement in the lumber camps of west Michigan. It is peculiar and unusually fatal, and seems to be contagious. In one camp over a dozen horses have died.

Chips.

AN unusually large number of spruce logs are being taken out in the eastern townships this winter.

The *Monetary Times* says:—Hemlock bark is worth from $6 to $7 per cord in the eastern townships, and the demand for it is brisk.

PHILIP RITZ has a tree planting contract with the Northern Pacific railway Company, and has been setting out along the line soft and hard maple, locust, walnut, box elder, peach, cherry, and apple.

M. P. GODFREY, manufactured last year at Alpena, 600,000 bed slats from mill refuse. A slick job. He has a contract for 1,000,000 next year. Why can't some of our mill men utilize their refuse in this manner?

THE *Northwestern Lumberman* says:—It is estimated that fully 100,000,000 feet of logs are already cut on the upper waters of the Menominee district. The Kirby-Carpenter company has already 20,000,000 banked.

THE *Monetary Times* says:—The pulp mills of the Three Rivers Paper Company, at Maddington Falls, with a capacity of five tons a day, are now in operation. It is intended to ship largely to the States, though a portion of the product will be utilized by the Portneuf mills.

THE Emerson *International* says:—Mr. S. R. Sutherland and other prominent gentlemen interested in the lumber trade, were the purchasers of the twenty-five million feet of lumber from the Rainy Lake Lumber Company. The lumber will be manufactured at the mills at Rat Portage and Fort Frances.

THE *Timber Trades Journal* of Dec. 30, says: The Liverpool market, some time ago exceedingly bare of the great selling commodity, spruce deals, now seems to be somewhat glutted. Orders from the interior have been scarce, and as a result prices have weakened and display no present tendency to recover their former position.

DURING the progress of some alterations in an old house in London, England, the paint was burnt off the panels of one of the room doors, when it was discovered that the woodwork was of excellent mahogany. Further examination showed that nearly all the painted woodwork in the house was mahogany. The house was built in the reign of Queen Anne.

THE making of wine casks appears to be an important industry at Bordeaux. We learn that there are over seven hundred cooper shops independently of those established at the large vineyards. Of these 140 are at Bordeaux, and 600 in other towns in the department. There are manufactured annually nearly a million and a quarter of casks, of the total estimated value of £700,000

AN Ottawa correspondent writing on Jan. 15, says:—Last evening a number of shanty teamsters arrived in the city from the Upper Ottawa. They were employed in the shanties of Captain Young on the Petawawa. They said the reason of their return was owing to the poor ice on the rivers and streams in that locality. They said that 14 teams in the employ of Sherman, Lord & Hurdman were drowned on Monday last.

The Napanee Mills Paper Company are preparing for the erection of a pulp mill for the manufacture of wood pulp for the express use of their extensive paper mills at Napanee, and that negotiations to secure site, etc., in Fenelon Falls are pretty well advanced. They will consume in the new manufacture, large quantities of poplar, basswood, white pine and other soft wood which have hitherto possessed little or no commercial value,

THE Ottawa *Citizen* says:—The rumor is again revived that the Canadian Pacific Railway contemplate putting a 400 foot addition to their lumber docks at Brockville, extending it up the river for that distance, and then so arranging their tracks as to unload direct from the cars to barges or vessels. There can be no doubt that such an improvement would meet with the heartiest approval from shippers and vessel men, as it would obviate much of the trouble which now exists. It would also form quite a large and safe harbor for shipping.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills

L7tf

ROBIN & SADLER

Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes for

Leather Belting,

LEATHER BELTING

Fire-Engine Hose, &c., &c.

Send for Price Lists and Discounts to the Factory

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MONTREAL.

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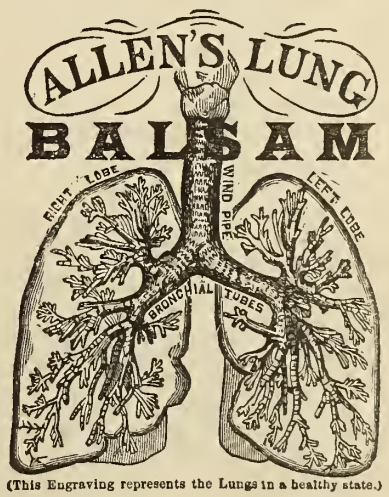

(This Engraving represents the Lungs in a healthy state.)

STRICTLY PURE.

HARMLESS TO THE MOST DELICATE.

In Consumptive Cases

It approaches so near a specific that "Ninety-five" per cent. are permanently cured where the directions are strictly complied with.

There is no chemical or other ingredients to harm the young or old.

As an Expectorant it has no equal. It contains no Opium in any form.

SOLD BY ALL DRUGGISTS

Perry Davis & Son & Lawrence,

SOLE AGENTS,

MONTREAL.

PERRY DAVIS' VEGETABLE PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

Market Reports.

TORONTO.

From Our Own Correspondent.

JAN. 24.—The extremly cold weather of the past week has again put a stop to all building operations, and as a natural consequence the yards are all quiet. Dealers are patiently waiting for more open weather and a conseqnent resumption of business. But, although retailers are thus compulsory idle, it is not so to the same extent with the wholesale dealers. Stocks are rapidly changing hands and by the opening of the spring all stocks of any magnitude manufactured to the north of this city will be concentrated in the hands of three or four prominent dealers here. The names of those likely to control the market here during the coming summer are as follows :—Messrs. Christie, Kerr & Co., S. & F. N. Tennant, S. C. Kanady & Co., and Donogh & Oliver. The stocks remaining outside of these parties' hands (except such as seek theirs' by way of Chicago) will be be quite trifling in comparison with the probable total cut to the north of this place. Of course there are many smaller mill stocks yet to be disposed of, and it is highly probable that a large portion of such will fall into the hands of the firms above mentioned. Prices at the yards remain firm at last quotations.

QUOTATIONS, FROM YARDS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	20 50
" " " 32 ft	22 00
" " " 34 ft	24 00
" " " 36 ft	25 50
" " " 38 ft	27 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	30 00
Threc uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	16 00
1 " " dressed	23 00
1 " " undressed	17 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent.

JAN. 25.—Business has been moderately active and there has been a fair retail trade done during the past two weeks for the season of the year. A number of American dealers have been here and also in Ottawa, making enquiries abont lumber and we understand a good many transactions have taken place in the latter district. The demand for the United States promises to be good this year. The opening prices in Ottawa are just about the same as last year, but they are stiff in one or two grades. We cannot make any change in our list. Prices are steady and maintain their strength as follows :—

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

LIVERPOOL MARKETS.

A. Dobell & Co., of Liverpool, quote the market as quiet at the end of 1882, but this is usually the case at the holiday season. Stocks with the exception of pitch pine are not excessive. There have been sales by private bargain of *spruce deals* as follows : Several cargoes of St. John, N. B., at £7 15s. and £7 10s. ; Halifax at £7 5s., and by auction of St. John, N. B., at £7 7s. 5d. The quotations there are as under : Quebec square white pine 1s. 7d., to 2s. 5d. ; Quebec waney board pine 2s. 3d. to 2s. 8d. ; Quebec red pine 1s. 3d. to 1s. 8d. ; Quebec oak first quality 2s. 10d. to 3s. 2d. ; ditto 2nd quality 2s. 6d. to 2s. 9d. per cubic foot.

CORDWOOD.

During this cold weather cordwood has been moving off very fairly, a pretty large quantity arrived about 10 days ago, since then there have been few importations. The dry wood cut last winter is now being got out of the bush and a good supply is looked for a little further on in the season, meantime prices are well maintained, but unchanged in figures. We quote ex cartage at the depot :—

Long Maple	$7 50
Short "	7 00
Long Birch	7 00
Short "	6 50
Long Beech	6 50
Short "	6 00
Long Tamarack	6 50
Short "	5 00

OTTAWA.

From Our own Correspondent.

JANUARY 10.—Lumbermen of the Ottawa Valley cannot help but feel grateful to Providence for the propitious weather for the manufacture of our greatest natural resource which exists this season. There has been a sufficiency of snow on the limits from early fall, and good roads have consequently been made. A great many shanties, far more than previous years, are operating on the Upper Ottawa, and an enormous quantity of logs and square timber will likely be taken out this season. The rush of men and teams to the woods is about over, and the demand now is small. Sherman, Hurdman & Lord send up a large number of teams to morrow, and Allen Grant has already despatched the amount he requires. The other firms have all about finished sending up labor, and the shanties are now working to their utmost capacity.

IMPROVEMENTS.

A large force of men left a few days ago by the C. P. R. for Black River. They were sent by Government to repair the timber slides at that the place. Extensive improvements will be effected during the winter.

EDDY'S MILLS.

Great rapidity is being made in the reconstruction of Eddy's mills in Hull. The work is carried at night as well as day, by the use of the electric light, as many as twelve lamps being burning nightly. A large number of machinists are employed making the necessary shafting. The pail and tub factory are in operation.

NEW MILL.

R. A. Campbell & Co. are building a new steam saw mill at Lachute, the dimensions being 56x112 feet. The sawing capacity will be about 25,000,000 feet in the season. Inglis & Hunter, of Toronto, are putting in the boilers and engine, and Messrs. Stuart & Fleck, of this city, supply the remainder of the machinery. It will be completed by May next.

LIMIT SALE.

Richard Nagle has disposed of one of his timber limits of 150 miles, on Black River, to Mr. Alex. Fraser, for $158,000.

LATER.

JAN. 25.—A larger force of men than usual are at present employed repairing the different Chaudiere mills. The improvements being effected are more extensive and numerous than in past years. Messrs. Brunson & Weston are having a complete new flume built in connection with their large mill on the Victoria Island. Messrs. Perley & Pattie, and J. R. Booth are renewing their yard platforms, and besides making other necessary improvements. E. B. Eddy has begun erecting his new saw mill on the site of the one which was destroyed by fire, laborers are employed night and day. Up to the present the pail factory is completed, and the new solid stone planing mill is in operation The works will be more extensive than before the late disastrons conflgration. The mill owners are taking extra precautions against fire. Messrs. Ahearn & Soper, electricians, of this city, are placing thermosthats in a few of the mills.

A great quantity of timber is being taken out of the limits this winter. The weather has been very favourable, but bad ice in many places has caused numerous difficulties. Quite a large number of horses have been drowned. A few weeks since reports were freely circulated of the existence, to an almost alarming extent, of small-pox among the shantymen. It has been, however, ascertained that no ground whatever existed for the rumor. The disease has been no more prevalent this season than in other years. Messrs. Fraser & Lereny who purchased Mr. R. Nagle's limits on the Nipissing, have already three shanties in operation. Next season will be a booming one in the saw mills here.

OSWEGO, N. Y.

From Our Own Correspondent.

Trade this week has been brisk ; country dealers having pretty well sold out are buying freely, and report a good healthy trade throughout the country. Sleighing has been good ; farmers and others find a ready market for produce of all kinds, and this stimulates the lumber trade ; collections are easily made ; prospects for more than an average business through the winter are good.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	1 90@ 2 25

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$57 00@64 00
Pine, fourths	57 00@59 00
Pine, selects	52 00@54 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25
Lath, pine, "	0 00@ 2 50

CHICAGO.

The *Northwestern Lumberman* of Jan. 20, says :—The lumber business of the United States and Canada is taking its annual rest. The difference between the condition last January and the one now passing is that now the dormant stage is a little more pronounced than it was last winter. Every well-informed lumberman knows the reason. A degree of overproduction and a shrinkage of values are having their effect. At the same time there is a prevalent feeling, or, perhaps better said, a hope, that next season's trade will be good. All agree that there is no reason why consumption should not be enormous, as the lower range of values sure to prevail will tend to encourage building operations and other uses of timber. For this reason preparations are being made for a heavy output. The supply will be more abundant than ever before, and the dealers are getting ready to handle largely, and take the chances of profit or loss. One thing they consider certain : conditions for buying bulk lumber will be more favorable next year than they were last. As to selling, every smart handler thinks he is equal to that emergency, and each one thinks he is as smart as anybody else.

The large surplus on hand is having its effect on the trade. The general demoralization of price lists in the interior gives each holder of stocks a chance to do a little quiet work on his own account, and often he is doing it. Emissaries are on the road and burdening the mails, and it is safe to conclude that the offers made in these ways look brilliant and fascinating to retail dealers and contractors. Cutting of price lists is, no doubt, more lavishly done in the interior than at the east ; but even in the more steady-going sections of the country it would not require much persuasion to obtain concessions on considerable lots. The movement is, however, so light that wholesale holders do not get the opportunity to show how generous they would be.

Reports from Albany and New York are more spiritless than for months past. The cold and continuous winter weather has cut off consumption, and the export demand is less than it was a few weeks ago. Spruce is fighting a battle with yellow pine in New York and vicinity, preventing any improvement in values that might be seen on account of the cessation of receipts. At Albany dealers are waiting for customers.

Receipts and stock on hand of lumber and shingles, etc., for the week ending Jan. 18, as reported by the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	Shingles
1883	3,703,000	1,088,000
1882	3,942,000	1,998,000

FROM JANUARY 1, 1883, TO JANUARY 18 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	9,517,000	5,292,000
1882	10,794,000	3,983,000
Inc		2,309,000
Dec	1,277,000	

STOCK ON HAND JAN. 1.

	1883.	1882.	1881.
Lumber	655,013,520	560,416,842	497,840,673
Shingles	299,946,350	260,906,494	188,722,000
Lath	76,361,002	49,820,438	50,321,185
Pickets	3,093,909	3,784,178	2,497,858
Cedar posts	78,034	219,012	63,659

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

BOSTON.

Cotton Wool and Iron of Jan. 20, says :—As is usual at this early period of the new year, the general market is quiet, with a light demand. The same condition of affairs seems to prevail throughout the country. The outlook in this vicinity is for a good steady trade the coming season, probably equal to that of the past year. Although the market is now so dull, the general expectation is that prices will not be much lower when trade starts up. Eastern lumber is arriving here in a limited way, with prices more or less nominal. Western lumber is in limited receipt, and stocks generally seem to very well in hand. Considerable walnut, however, is yet held in first hands, with ash and cherry pretty well reduced. Western pine is quiet, with the demand only for present wants. Something prime is dull and rather in buyers' favor.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Threc uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

BRISTOL.

The *Timber Trades Journal* of Jan. 6, says : Messrs. King Brothers' January circular contains the following remarks :—The timber trade during the past month has beeu of the most uusatisfactory description, and what little demand existed previously appears to have been amply satisfied. We trust that with the new year a change for the better may take place. Quebec goods.—Yellow pine timber of good quality is in fair demand. Birch, ash, and elm have been in fair demand at slightly increased prices. Walnut—No importations. Deals are not now iuquired for, buyers having obtained

their stocks. Staves continue in request. New Brunswick goods.—Spruce deals are a trifle easier in price, yet the demand is but languid. Stocks are sufficient. Pine deals.—No arrivals. Birch remains quiet.

GLASGOW.

The *Timber Trades Journal* of Jan. 6, says: Business is at a stand this week, the public works being closed for the New Year holidays. Imports, which are very light, include a cargo of pitch pine at Greenock. The stock of this wood on hand is altogether about 21,000 loads. There was a slightly heavier stock last year. The activity in the shipbuilding trade gives promise of a large consumption. As regard stocks on hand of Quebec log timber, particulars of wich will be shown in a future issue, they will show, taken altogether, a decrease compared with the total of a year ago to the extent of over 13,000 loads.

LIVERPOOL.

The *Timber Trades Journal* of Jan. 6, says: As customary during the holiday time there has been very little business done, nor is it likely that there will be any liveliness displayed until the mahogany sales announced to take place at the end of this week.

The ordinary quietude for which every one looks during this season has not yet been affected in any visible degree by the presence of those buyers who often come into the market immediately the year turns, although several have put in an appearance; but the effects of their purchases are not sufficiently marked to make them worthy of particular comment.

Speaking generally, the import has been upon a moderate scale, but that of spruce deals has been beyond the requirements of the market, and as the demand during the past month has been below the customary limit, stocks of this article have increased to an extent of about twenty-five per cent. over those of last year at this time.

Latest advices from St. John, N. B., however, point out that no ships are there under charter, and that shippers are unwilling to pay the rates demanded, owing to the low prices realized for spruce deals in this country; therefore vessels are leaving that port and proceeding further south in search of more profitable employment, one having left for Norfolk and one for New York, where better freights are being offered for grain.

LONDON.

The *Timber Trades Journal* of Jan. 6, says: Colonial goods are very moderately represented in the dock stocks, and although the import of 1881 was not by any means a heavy one, that of the past twelve months has been to London, at any rate, considerably less, and at no time last season have the dock stocks of Quebec goods been equal in quantity to those of the previous year.

Broad pine in good quality is quite a rarity at the public sales, and is scarce, we understand, in the market. Prices have not sympathised with the low stocks, though most of the pine stocks, we believe, are now held in first hand.

Spruce, also moderately represented in stock here, does not go off so briskly as was anticipated. The large stocks of other descriptions of whitewood with which it comes into competition no doubt hinder any advance in value, while the trade generally is not active enough to give any fresh stimulus to the demand.

We do not hear of any fresh business actually effected for the new year in the deal trade yet, though several offers have been received by the shippers; the prices, however, have in the most cases presented such a wide difference compared with their quotations that a refusal has been the result. In flooring boards, however, sales continue to be made, and the likelihood of the demand being well sustained is more than probable, the greatly reduced stock here operating favorably on the market.

WINNIPEG TRADE.

The *Northwestern Lumberman* says:—The demand for lumber here during the past season was good, and there was about 40,000,0000 feet brought here, about one-half of which came from St. Paul and Duluth, and the other half divided between Ontario, Lake Winnipeg, and Lake of the Woods districts. There has been about 10,000,000 feet manufactured here at three mills, the logs for which were brought from Minnesota. The mills have each a capacity of 5,000,000 feet a season, but did not get to work until very late. Business is very quiet here now, as very little building can be carried on here on account of cold weather, although there are some buildings in progress. It is impossible at present to say what amount of building will be done the coming season, but our impression is that there will not be as much as there was last, which is put in round numbers at $5,000,000. The winter operations on Lake Winnipeg are said to be about 50,000,000 feet, which is all spruce and tamarack. I have not heard any estimate made of the quantity of timber in that district. In the Lake of the Woods district there is said to be about the same quantity being got out. It is red and white pine, with some spruce and tamarack, but it is mostly of the former. The wages paid are about $30 per month, and board. It is expected, now that the Thunder Bay branch of the Canada Pacific railroad is open, that a considerable quantity of timber will be brought from Georgian Bay by that route, but as the quantity being manufactured in the two sections I mention is so large, I do not think that there will be much brought in that way.

The Australian Trade.

Messrs. Gemmell, Tuckett & Co.'s last report received, and dated Melburne, November 22nd, says:—The consumption of timber during the month has been fully up to the average, but the large importations from Oregon, Sweden, and Norway have had a depressing effect on the market, and prices are lower. American lumber.—Sales during the month light, but prices realized for the parcel ex St, Patrick show an advance, Michigan clear bringing $18 to £18 5s., w. p. shelving, £10 5s.; w. p. t. and g. ceiling, £9 12s. 6d. per m. super. The trade hold light stocks, and prices will improve.

Northwest Lumbering.

From Mr. R. J. Short, who has the contract for supplying the C. P. R. with ties and lumber, the Winnipeg *Sun* learns the following facts regarding the operations at the Lake of the Woods:—Mr. Short at present has 160 men and is constantly adding to the number. In gangs of 40 they operate in much the same manner as Ontario lumber gangs. Choppers get $30 per month and board, and hewers $50. Last year up to the 23rd December 125,000 ties were taken out besides a large number of telegraph poles. The ties are principally red and white pine and tamarac, which are much harder than similar woods growing in Ontario, and are said to be as durable as cedar. Of logs 5,000,000 feet have been dressed already, and they expect to have 10,000,000 before the season is over. The quantity of lumber in that part of the country, Mr. Short says, is nothing to boast of.

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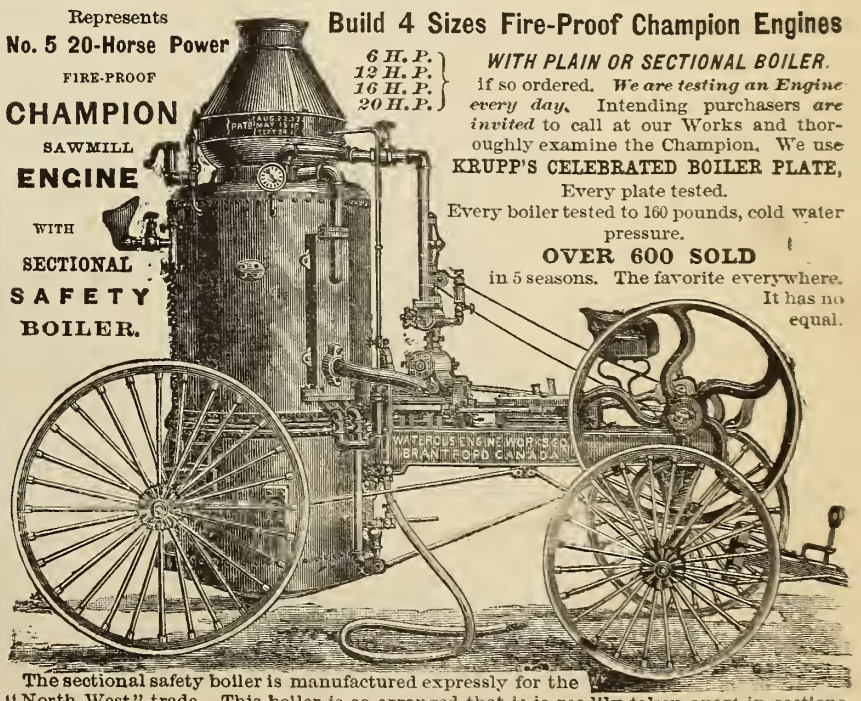

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FORESTRY.

We take the following from the report of the committee charged with the oversight of fruit and forest planting at the agricultural college, Guelph :—

FORESTRY.—The several clumps of black walnut, European larch, butternut, sugar maple, and of mixed trees, are doing fairly well, except that the group of larch from some cause did not succeed, probably owing to the dry character of the soil in which they were planted. There is, however, a sufficient number of young larches in the nursery plot to supply all the vacancies. It was found desirable to use the field in which the clump of ash had been planted as an experimental grain plot. On this account they have been taken up and will be set out in another field next spring. The experiment of growing black walnut with and without cultivation is already demonstrating the fact that the growth is much more satisfactory where clean cultivation with occassional stirring of the soil is practiced. The nursery plantations of young trees will supply a considerable portion of the trees required for the proposed enlargemont of existing clumps, and by keeping up a constant succession of nursery plantings the required trees for foresting purposes can be always at hand in the best possible condition for transplanting.

THE ARBORETUM.—In attempting to extend the Arboretum the Committee found that it was absolutely necessary to re-arrange the front grounds, and to provide some definite and well arranged plan that harmonized with the grounds and buildings on which to base all future work. Hitherto no such plan had been prepared, hence it was impossible to proceed systematically with the extension of the Arboretum in a manner that would subserve the purposes of education and at the same time adorn the grounds and produce the proper landscape effect.

After some correspondence we were so fortunate as to secure the services of the most eminent landscape gardner in America, Mr. Charles H. Miller, of Fairmount Park, Philadelphia. He visited the college in April last, and examined the grounds thoroughly in company with yourself, the Committee and architect. He has now prepared and placed in our hands a most admirable plan of all that part of the grounds ; this plan has been approved of by yourself, and when the planting and grading shall have been completed in accordance therewith, we believe that the college grounds around and in front of the buildings will be all that can be desired. Work has been already begun, and the grounds immediately in front of the main building laid out in conformity with the plan, and the requisite carriage ways to the recently erected residences of the Professor of Agriculture and of the Bursar provided. Already a great improvement in the appearance of the grounds is manifest, a pleasing foreshadowing of the results to be achieved when the whole work is once completed and time enough shall have elapsed to produce the growth necessary to give due effect to the whole. Ample space is now set apart for the planting of an extensive aboretum, which your Committee intend shall be grouped in such a manner as to be convenient for study by the young men and serve as illustrations in teaching, and at the same time these groups will be so placed as to give the best landscape effects.

THE SEED BEDS.—With a view to giving a supply of young trees for future planting, and to afford at the same time instruction in the raising of forest trees from seed, a number of beds were prepared and sown with tree seeds. As was to be expected some of these seeds failed to germinate the first season, and after lying dormant in the ground for a whole year, came up in the second spring. From these beds a goodly number of some varieties of trees and shrubs will be obtained. Some of the kinds sown have apparently failed altogether, thus affording lessons to the students from failure as well as success.

FUTURE OPERATIONS.—We have made arrangements with the Professor of Agriculture for a half acre block in the Experimental Field, which it is our intention to surround with a hedge formed from a variety of hedge plants, for the purpose of showing a sample of hedge formed from each. This will afford both students and visitors an opportunity of seeing the adaptability of each for hedging purposes. The enclosed plot will be devoted to nursery beds for the growing of young trees taken from the seed beds or procured by purchase, until they have attained sufficient size to be removed to permanent situations. It is also intended to set out in the spring two or three additional clumps of forest trees, one of white ash, one of American elm, one of mixed evergreens, also to complete the group of European larch, and extend that of Sugar Maple.

In the orchard all vacancies will be filled up, and the acre of ground recently purchased planted out so as to complete that portion ; and such other varieties added as may be desirable for the purpose of testing their adaptation to our climate. Some additions will also be made to the plantation of gooseberries currants, raspberries, and strawberries, in order to furnish a sufficient supply of these fruits for the use of the college, a large part of which will be taken from the existing plantations, particularly of raspberry and strawberry. Some new varieties of these fruits and of grapes will also be set out in the spring together with a few mulberries, so that the work of testing these may keep pace with the progress of horticulture elsewhere.

In conclusion, your committee would say that such progress has been made in the department of fruit culture and forestry during the short time that has elapsed since you confided these to our direction as we trust will be satisfactory to you, both in the amount of work done and in the economical manner in which it has been accomplished. In a work of this kind great results cannot be achieved in a single season, yet, even now some fruit is being gathered, some improvements we think are to be seen, and these, we believe, will increase in progressive ratio as the years roll by until the results shall be seen in an abundant supply of fruits, of all kinds suited to the climate, sufficient to meet all the wants of the college, both for consumption and comparison ; and groves of trees, and groups of specimens of every variety of tree and shrub shall give beauty to the landscape, and afford means of instruction in all that a well informed yeoman can wish to know of the character and uses of the forest productions of his native land. On behalf of the Committee, D. W BEADLE, Secretary.

LIVERPOOL TRADE.

LIVERPOOL, Jan. 2.—James Smith & Co.'s circular contains the following :—There has been an increased import of white pine as compared with last year, but this has been less than the consumption, so that the stock of all kinds is still light, say 684,000 feet, against 770,000 cubic feet. Red pine is heavy in stock, and the consumption has been small. There have been no fresh arrivals. Ash is in good demand, and the stock is moderate. Elm has come forward freely, but the consumption continues good, so that the stock will be all required before the new import commences. Walnut is in fair request ; the supplies have been somewhat heavy, still prices are firm. First-class large wood, *via* New York, has been sold at 6s. 4d. to 7s. 4d., averaging 6s. 9d. per cubic foot, and smaller wood at 5s. 6d. to 6s. per foot. Oak has gone into consumption on a reduced scale, and there is an ample stock. Sales have been made of several parcels at from 2s. 10½d. to 3s. per cubic foot. Oak planks are in fair demand and prices are without change. Birch has been in good request, but prices have latterly given way, owing to the large arrivals. Halifax wood has been sold at 16½d. per cubic foot, and maple at 13½d. per foot. N. B. and N. S. spruce deals : The import has been excessive, namely, 11,100 standards against 4,255 standards, and there having been no corresponding increase in the consumption, the stock has become heavy, viz., 22,714 standards, against 16,653 standards at this time last year. At the date of our last issue prices were at about £7 15s. per standard for St. John deals, but by the middle of December the prices obtained at auction were £7 7s. 6d. per J. H. McLaren, from St. John ; £7 7s. 2d. per Finn, from Musquash ; £7 8s. 2d. per Hvideern, from Musquash ; and £7 3s. 10d. per Tatay, from Parrsboro' ; and a week later the cargo per Guldfaxe, from Oak Bay, averaged at auction £7 5s. 3d. per standard. By private, sales have been made from £7 6s. 3d. and £7 5s. for Halifax, and £7 11s. 3d. for Miramichi. Pine deals have been sold at £13 15s. for first quality Miramichi, and £9 for second quality ; the stock is moderate. Quebec pine deals are moderate in stock in spite of the increased import, as the consumption has been continued on a large scale. A parcel of bread deals, 11 in. and upwards, realized £25 15s. for 1sts, £18 for 2nds and £12 for 3rds. Quebec pipe and puncheon staves are rather dull of sale ; the stock is not heavy. No sales have been reported. Palings have been sold at 65s. per mille for 4½ feet. Laths and lathwood are without change.

Preservation of Railway Ties.

Some interesting data are published showing the relative value of different methods of injecting railroad ties. On the route from Hanover and Cologne to Minden, for example, the pine ties injected with chloride of zinc required a renewal of twenty-one per cent, after a lapse of twenty-one years ; beech ties injected with creosote required a renewal of forty-six per cent after twenty-two years' wear ; oak ties injected with chloride of zinc required renewal to the extent of about twenty-one per cent after seventeen years ; while the same kind of ties not injected necessitated fully forty-nine per cent of renewals. The conditions in all these cases were very favorable for reliable tests, and the road bed was good, permitting of easy desiccation ; the unrenewed ties showed, on cutting, that they were in a condition of perfect health. On another road, where the oak ties were not injected, as large a proportion as 74·48 per cent had to be renewed after twelve years ; the same description of ties injected with chloride of zinc required only 3·29 per cent renewals after seven years, while similar ties injected with creosote involved, after six years, but 0·09 per cent.

A Vast Viaduct.

The great Linzua viaduct on the branch road of the New York, Lake Erie & Western line, near Alten, McKean county, Pa., is called the highest structure of its kind in the world. It is 2,052 feet in length, and is supported by 20 towers, each composed of four wrought-iron columns, with the requisite bracing. The roadway is laid on latticed girders of 61 feet span, and the cross-ties are eight inches apart. On each side of the rails are heavy, square timbers laid parallel with the track, which would hold an engine from going over into the abyss if it were to jump the track. A passageway on either side, laid with yellow pine and and secured by a railing four feet high, enables pedestrians to pass over leisurely and view the scene from this great elevation. The bridge in the centre is 302 feet in height. About 4,000,000 pounds of iron were used in its construction, and the entire cost of the structure was nearly $300,000.—*Northwestern Lumberman.*

Kentucky Opportunities.

The *Northwestern Lumberman* says :—A northern gentleman who had been through Kentucky, writes about the Cumberland mountain region as follows : The hills are overspread with a splendid growth of basswood, poplar, beech, maple, oak, chestnut, Norway pine, cedar and hickory. These lands have never been opened, however, and the timber stands and rots. I was offered 100 acres of Norway pine, that would cut 10,000 feet to the acre, for $100. Stumpage is worth almost nothing. Something is done manufacturing stave bolts for the numerous distilleries, and a few saw-mills, which think they do something wonderful when they saw 5,000 feet a day, are scattered through the hills. There is need here of northern enterprise and money, and the time is seen coming when there will be plenty of both. A dozen railroads are projected, and some are being built now which will carry to market this lumber.

Miramichi Notes.

The St. John, N. B., *Telegraph* says :—Gabriel Yerxa has six camps established on Burnt Hill Brook and its branches ; at these camps he has 150 woodmen and 30 pairs of horses. He expects to get out 7,000,000 feet of lumber this season. Harry Turnbull has two camps on Clear Water, and his product will be about 2,000,000 feet. Messrs. Yerza and Turnbull's lumber is under contract for Guy, Bevan & Co. Timothy Lynch has a very large force on McLean Brook, McKiel and South West Branch ; his cut is estimated at 12,000,000 ; his depot camp is on McKiel, where he has 15 pairs of horses and 60 men. M. Welch expects to cut about 4,000,000 at the head of the South West. William Richards is operating heavily along the South West, and Charles Smith is cutting a great quantity on the Todd block. The snow here is about two feet deep.

DURING the year 1882 there was shipped from the port of Jacksonville, Fla., 68,041,546 feet of lumber, as compared with 58,837,451 in 1881, and 41,719,255 in 1880, an increase in 1882 over 1881 of 9,204,095, and over 1880 of 26,322,291. It will thus be seen that, while a fair increase has been made this year, the great bound forward in lumber production in the country tributary to Jacksonville was made in 1881.

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestable food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

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MR. THOMAS W. RACE, Editor and Proprietor of the Mitchell *Recorder*, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Billiousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

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LOGS BY RAIL.

The *Lumberman's Gazette* says :—Ten years ago the idea of hauling pine logs by rail would not have been entertained as a profitable undertaking, but of late years it is a recognized industry. Aside from the short lines that are scattered throughout the pine forests of northern Michigan, logs are hauled in great quantities by railroads to terminal points. The F. & P. M. railroad handles pine logs extensively, the bulk of the product coming to the Saginaw river. The Mackinaw division of the Michigan Central has handled a large quantity of pine logs during the past two years. Tawas & Bay County road hauls logs to Tawas, and the Saginaw Bay & Northwestern haul a good many logs to Saginaw Bay, which come to Saginaw river mills.

During the month of December the Flint & Pere Marquette hauled 11,964,532 feet of logs of which 5,040,370 feet came direct to the Saginaw river. During the year 1882 this road hauled 95,294,620 feet of logs of which 46,226,419 feet came direct to the Saginaw river, and 29,932,530 feet were distributed between Midland and Averill. Of these 12,595,870 feet were manufactured at Midland and 17,336,660 feet came through the Tittabawassee booms to Saginaw river mills. The balance of those not coming to the points named went to Manistee. The record of this road in log hauling during three years, shows as follows :—

	Feet.
1880	87,475,546
1881	105,296,530
1882	95,294,620

During November the Saginaw Bay & Northwestern road hauled 5,305,782 feet, and in December 3,592,165 feet making a total for the year of 86,030,768 feet. The Tawas and Bay County road hauled during the year 38,436,570 feet, and the Mackinaw division of the Michigan Central 60,000,000 feet. The aggregate for 1882 shows as follows :—

	Feet.
Flint & Pere Marquette	95,294,620
Michigan Central	60,000,000
Saginaw Bay & Nortbwestern	86,039,768
Tawas & Bay County	33,486,570
Total	279,820,858

A Big Crop.

The *Lumberman's Gazette*, of Bay City, says : Reports from the pineries in almost every direction are almost unanimous to the effect that there will be an enormous crop of logs put in this winter. In some localities there have been complaints about the difficult hauling and skidding, but this difficulty has not been insurmountable, and the late cold weather has about overcome it, and logs are not only being cut at a lively rate, but they are being banked with all possible dispatch. Every available team which can possibly be secured is being rushed to the pineries, and the country districts are being scoured for horses to put on the log roads. During the past week or ten days, these teams by scores have passed through the city headed for the logging districts ; therefore present indications are to the effect that there will be no shortage in the log crop next season, whatever else may betide the lumber industry.

Preserving the Forests.

The speech from the throne at the opening of the Quebec Legislature contains the following paragraph :—The deliberations of the Forestry Congress, held at Montreal in September last, have had the effect, in a marked manner, of directing attention to the important subject of the preservation and renovation of our forests. My Government are considering the most effectual method of attaining such a result, and a bill will be submitted to you to limit the destruction of our woods and forests without diminishing the public revenue.

Worms in Wood.

Worms in hardwood are not an uncommon nuisance. Oak, ash and other lumber is often thus invaded, and there is danger of destruction to wood from that source unless great care is taken in felling, handling and storing timber, even after it has been worked into shape and placed on the market. Cases have been known where the worms have worked their way into white oak posts in such a way as to be unnoticed till the timbers had been painted, and the wood-dust exposed their presence, after which they made their appearance in great numbers. They bore under the surface in a circuitous way, and not to any great depth. Carbon oil destroys them, and sometimes it is regarded as a wise precaution to coat timber with that material.—*Northwestern Lumberman.*

THERE are over 100 rafts locked in the Clarion river, Pa., by the ice. Lumber towns along the river have been injured to the estimated extent of $250,000.

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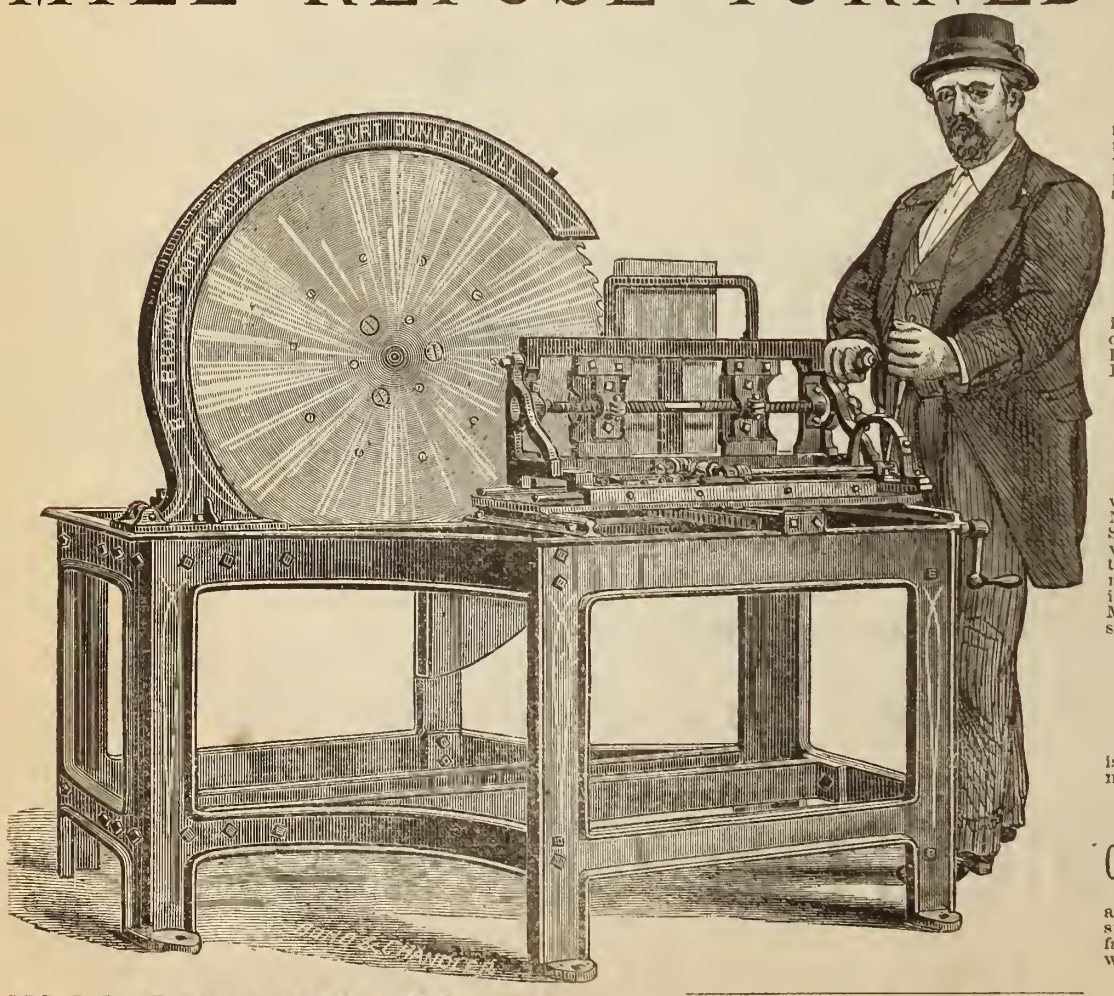

BY THE USE OF

Brown's Patent Spalt and Shingle Mill,

for making Shingles, Barrel Heading, Box Stuff, &c., from spalts, board trimmings, slabs, and mill waste generally, turning material otherwise worthless into valuable products. I have made arrangements with the patentee to manufacture and sell for the Dominion; have made and sold a good number of these machines which are giving excellent satisfaction and can give the best of references.

Our Steam Feed for Circular Mills,

is now the Best Feed where Steam is the motive power. It is easily operated, is simple, rapid, and seems never likely to wear out; sixteen 16 ft. boards, or eighteen 12 ft. boards, have been cut by it in one minute. It is the established feed for steam mills; I make a specialty of its manufacture; will guarantee satisfaction.

Our Patent Twin or Span Circular,

with Steam Feed for Steam Mills, and Rope or Rack Feed for Water Mills is fast coming into general estimation and is used in place of Gang Slabber in our best Canadian Mills. One of our Span Circulars which will slab logs 25 inches in diameter down to 7 and 8 inch stocks, will do the work of three slabbers, with an immense reduction in first cost, running expenses and labour. Two of these machines can be seen at work in Messrs. Gilmour & Co's Mill, Trenton, and Georgian Bay Lumber Co's Mill, Waubaushene and Port Severn. I am also introducing a new style of Mill Engine, neat, substantial and simple, with Corliss Frame and Balanced Valve, all carefully designed and honestly made.

Covel's Automatic Saw Sharpener,

is now well-known and highly appreciated, when placed at work in the mill it sings out its own praise; I keep it constantly on hand, ready for immediate shipment.

Our Standard Circular & Gang Mills & Machinery,

are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a specialty, any party wanting a First-class Mill will find it to their advantage to give me a call.

WILLIAM HAMILTON, Peterborough Foundry and Machine Works, **PETERBOROUGH Ont.**

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

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CALCASIEU, La., is placing yellow pine lumber in the yards at Laredo, Texas, and selling it profitably at $32 per thousand.

THE Wisconsin Central road recently put into use a new style platform car, arranged particularly for carrying lumber and long timber. Its capacity is 30 tons, and it has three trucks—one under the centre.

THERE is an unusual demand for "second growth" pine in Addison county, Vt., the dealers buying all that is to be had. The bulk of it is for the Massachusetts trade, and much of it is being sawed "through and through" at the local mill, being then shipped for use in box making.

NASHVILLE, Tenn., has one of the largest wooden pump factories in the world. Fifteen hundred pumps can be bored in a single day. There are four engines and three circular saws. A box factory is attached. The company handled 9,000,000 feet of lumber last year, worth $207,000, and has now on haud several million feet of nice lumber. The works employ 215 hands and are lighted by electricity.

VALUE OF HARDWOOD.

The *Lumberman's Gazette* of Bay City, Mich., says:—On more than one occasion we have alluded to the value of hardwood timber lands is this state, and maintained that no true estimate had yet been put on them. In order to give our readers some conception of what these lands are really worth, it may be stated as an admitted fact that hardwood lands are always estimated at a much higher value than pine lands for agricultural purposes; but this does not comprise the extent of their value. The timber is rapidly coming into demand and favor, and should be protected and saved from destruction further than the absolute necessities of each particulor case demands, as in a few years the timber will be of inestimable value; or at least to the extent of many times the worth of land on which it is standing.

HEAVY OPERATIONS.

The Chigago *Northwestern Lumberman* says: The Roscommon Lumber Company, of which S. B. Barker, af this city, is president, and C. B. Field, of Grand Haven, Mich., general manager, organized last season, has taken hold of logging this winter with much vigor. The company owns 375,000,000 feet of standing pine, tributary to Houghton lake, Roscommon county, Mich., and has built 12 miles of logging railroad from the lake into the heart of this great belt of timber, which is regarded as one of the finest bodies of standing pine in Michigan, as is evident from the fact that last fall the company sold 12,000,000 feet of it for $12 a thousand for all over 12 inches, and $7.50 for all under that size. The company is now putting in 150,000 feet of logs per day over its railroad. The track of the road is iron, with small T rails, and is well ballasted with good ties. The gauge is three and a half feet. The track is expended out into the lake by means of piles and stringers. The cars will be run winter and summer, and the track extended further and further into the woods as it shall become necessary to reach the pine. The company has nó mill, and consequently the logs will be put on the market.

AMERICAN FLOORING.

The London *Timber Trades Journal* says:—Among the fresh introductions of the new year if we had to report a cargo or two of cheap pine flooring ready prepared as shipped from one or other of the American ports, there might be cause for the Norwegian flooring trade to feel alarmed, for there is really no reason why pine flooring should not be extensively used here. In the States white pine is preferred to what they term yellow (pitch pine), and, when painted over, the floors become watertight, and will wear for years. There is less shrinkage about yellow pine than ordinary deal, as long as it is kept dry, which the paint insures, and it will stand as long as any other kind of wood. Irrespective of pine, however, the American plan of covering their floors with a coating of paint is one that should recommend itself to all householders here, on the score of being much cleaner and more wholesome than the present system. Water spilt on the carpet penetrates through the upper rooms and discolours the ceilings of those underneath, but if the boards were well painted when first laid down this would not happen. When a house has to be scrubbed down the soapsuds and dust rubbed into the floors of the ordinary English house must contrast unfavorably with that of a house that has undergone a similar cleansing in New York or other cities of the States, where painted floors are almost universal.

LONG LEAVED YELLOW PINE.

(*Pinus Australis.*)

This term is but imperfectly understood, and is just now greatly misused in the sale of southern lumber in the northern market. It is not strange that shippers of lumber should take advantage of the reputation of Georgia, Alabama and Florida pines, and attempt to sell everything in the shape of Southern pine lumber as "long leafed." But this is so criminally unjust to these states that we feel compelled to refer our readers to the United States census of 1880 (10th census), showing the facts upon this subject. We do this with no desire to make invidious comparisons, but simply to set our timber interests right before the world.

Georgia, by her greater enterprise, has already proven the excellency of her lumber, and gained a world-wide reputation.

Alabama, however, has standing to-day over 2,000,000,000 feet more of the same long leafed pine than Georgia; in addition to which she has over 2,000,000,000 feet of short leafed pines (Pinus mitis). Florida, North Carolina and South Carolina have all long leafed pine. Arkansas, which is set down as having more pine than any of the southern states, except Texas, has all short leafed pine (*Pinus mitis*), with a considerable mixture of Loblolly (*Pinus Taeda*), but she has no long leafed pines. This being the true state of facts, it is highly unjust for dealers and manufacturers at St. Louis and other Mississippi river points to force their inferior pines upon the northern market on the reputation of the genuine long yellow leafed pine. We only ask each dealer to note what we say and investigate for themselves, and we also wish land explorers who contemplate timber investments or for milling to give these facts the weight to which they are entitled, and you cannot fail to see that our lumber should be classed far above the "short leaved."—*Gulf Stream.*

POWER OF NAILS AND SCREWS.

The following resume has been made of experiments upon the adhesive power of nails and screws: Haupt, in his "Military Bridges" gives a table of the holding power of wrought-iron rod nails, 77 to the pound, and about three inches long. The nails were driven through a one-inch board into a block, and the board was then dragged in a direction perpendicular to the length of the nails. Taking a pine plank nailed to a pine block with eight nails to the square foot, the average breaking weight per nail was found to be 380 pounds. Similar experiments with oak showed the breaking weight to be 415 pounds. With 12 nails to the foot square the holding power was 542½ pounds with six nails in pine 463½ pounds. The highest result obtained was 12 nails to the square foot in pine, the breaking weight being in this case 612 pounds per nail. The average strength decreases with the increase of surface. Tredgold gives the force in pounds required to extract three-penny brads from dry Christiana deal at right angles to the grain of the wood as 58 pounds. The force required to draw a wrought-iron six-penny nail was 187 pounds, the length forced into the wood being one inch. The relative adhesion when driven transversely and longitudinally, is, in deal, about two to one. To extract a common six-penny nail from a depth of one inch in dry beech, across grain, required 167 pounds, in dry Christiana deal, across grain, 187 pounds, and with grain 87 pounds. In elm the force required was 327 pounds across grain, and 257 with grain. In oak the figure given was 507 pounds across grain. From further experiments it would appear that the holding power of spike nails in fir is from 460 to 730 pounds per inch in length, while the adhesive power of screws two inches long, .22 inch in diameter at the exterior of the threads, 12 to the inch, driven into one-half inch board, was 790 pounds in hardwood and about one-half that amount in soft wood.—*The Woodworker.*

FOREST PROTECTION.

Recently two daily papers, published in New York, had editorials on the same day that read very much alike. They both started to discuss the question of duty on lumber, and ended by saying that it is a great necessity just now that our forests should be protected. It is easy to admit that a discussion of the tariff question would naturally lead to a mention of forest protection, but the conclusions of these editorials were so similar that it was not difficult to imagine that one brain suggested both. There is a great deal said nowadays about the protection of our forests, and many are of the opinion that it is the talk of philanthropists who have the good of the people at heart. That, looking down the dim future, these philanthropists see a want of trees, and will endeavor to supply that want by complying with the old adage, "a stitch in time saves nine." The *Lumberman* has known for some time that certain gentlemen were trying to create public opinion by getting as many of their communications as possible inserted in the newspapers, these communications vividly portraying the wicked way in which our forests are destroyed by axe and fire, and suggesting that such slaughter should be stopped. The *Lumberman* has also known for some time that pure philanthropy is not the only foundation this concerted move rests upon. These gentlemen, to use a term known in politics, are laying pipe. They are not looking so much after the welfare of coming generations as they are after offices. They hope that congress will make a big appropriation for the protection of forests, and that they will handle and absorb the appropriation as a remuneration for services in doing what little they may in the way of preventing forest fires, and the unnecessary destruction of small trees. Whatever reason there may be in the arguments of these gentlemen, their plans may meet with some opposition from the fact that the most lovable side of a man's nature is not that side that yearns aloud for the creating of an office, and theu avows that it would suit him mighty well to fill the office, and goes to work by "playing" the newspapers to bring about that end. That forest protection in certain directions is needed admits of no question, and when, if ever, we have laws for that purpose, the manipulating of them should be placed in competent hands. The bungling of late in connectiou with forestry ought to answer for some time.—*Northwestern Lumberman.*

DISTRICT OF NIPISSING.

We take the following from the annual report of the Ontario Commissioner of Crown Lands, as to the timber berths north of French River :

TORONTO, ONTARIO,
4th December, 1882.

SIR,—I have the honor to report that in obedience to instructions received from the Crown Lands Department, and dated July 14th, 1882, I proceeded to the field and made a survey of certain timber berths north of French River, that is to say, I ran the south boundaries of timber berths numbers sixty-seven, fifty-nine, fifty-one, forty-three, thirty-five, twenty-seven, nineteen and eleven ; the bonndary lines between numbers forty-three and fifty-one, between nineteen and twenty-seven, between twenty and twenty-eight, and between twenty-one and twenty-nine. I also produced the line from the southeast angle of number eleven due east to strike French River, and ran a line due south from the south-east anglo of number twenty-seven, to the township of Blair ; the total number of miles run being seventy-seven miles ten chains. The lines were all run astronomically, and corrected from time to time during the progress of the survey, by observations of Polaris at its eastern elongation ; the chaining was done with a Chesterman's steel tape.

I began my survey at the southwest angle of berth number sixty-seven, being a point on Salter's meridian line at the distance of sixty chains seventy-seven links south from his eighteen mile post, and running due east astronomically, at five miles one chain and forty-two links, I established the southeast corner of timber berth number sixty-seven ; six miles further on established the southeast corner of number fifty-nine ; and made each succeeding berth six miles wide, excepting number twenty-seven which was made seven miles. From the southeast angle of number fifty-one I ran north between forty-three and fifty-one, to the southwest angle of berth number forty-four, where I found an old post marking the position of said southwest angle : this line between numbers forty-three and fifty-one came out eighteen chains fifteen links short of the six miles. The line between nineteen and twenty-seven, etc., came out on Salter's line sixty chains sixty links west of the post planted during the present season to mark the southwest angle of the township of Dunnet, and the boundaries between number twenty-one and twenty-nine came out twenty-eight chains fifty-two links short of the six miles. This discrepancy between the theoretical and the actual distance between Salter's line and the one run by myself is abnormally great, even after making due allowance for the considerable length of the lines and the general rough nature of the country. The result is, of course, that some of the included timber berths will have less than their normal area. This circumstance is, however, of comparatively small consequence practically, as from all I could gather from information received from persons evidently well acquainted with the region, all the timber has been killed by the fire which swept through some years ago. There is thus no pine nor timber of any other kind of any commercial value on the berths specially affected by the error in question.

I shall now describe as concisely as I can, the tract of country that came under my observation during the survey. The geological formation is the Laurentian as is well known. The rock is gneiss principally ; on the south boundary of timber berths number twenty-seven, however, a few belts of syenite, or syenitic gneiss were observed. The gneiss is of the ordinary micaceous character, and in many places it is very distinctly foliated, presenting a regularly banded aspect. The rock west of the Wahnapitae River contains a larger proportion of feldspar than the rock further east. Towards the west side of timber berths number forty-three the strike is about north twenty degrees east, and has changed to north thirty-five degrees west, a few miles further east. Along the lines between numbers nineteen and twenty-seven, etc., the strike is more nearly east and west, being north of west, and south of east. Everywhere the strata appears to dip at a high angle. Along timber berths numbers sixty-seven, fifty-nine, fifty-one, forty-three, thirty-five and about a mile and three-quarters over upon number twenty-seven, most of the suface is rock, and is generally rough and broken and is quite unfit for settlement, containing as it does a very small percentage of arable land. The small areas of good land over the distance named, occur on timber belts number fifty-one and thirty-five, as shown in the field notes, and in small areas along the Wahnapitae River. East of this stream, all along number forty three, and for a mile over upon number thirty-five, the country is almost totally barren of soil, the surface being almost exclusively occupied by bare gneiss rock, or mossy swamps. In going east, as a point one mile and three quarters east of the southwest angle of number twenty-seven is reached a marked change may be noticed in the topographical features of the country ; the surface becomes level, or gently undulating, the rocks appearing to have been by glacial action, planed down to a more or less uniform surface. This character of country prevails, with a few exceptions, as far east almost as Wolseley River, and north to Salter's base line.

From the point above mentioned, one mile and three quarters east of southwest angle of number twenty-seven, as far east as almost to the end of the third mile on number nineteen, there is excellent land interspersed occasionally by small patches of rock cropping out. The soil is chiefly a brown clay loam of good quality. This tract of arable land extends south to the gorge of French River, but it is doubtful whether it extends very far to the north. To the east and to north of this tract of good land, as far as my survey extended, the land is rocky and unfit for settlement, the percentage of good land being very small.

The line going south from the southeast angle of timber berths number twenty-seven, to the south channel of French River, passes over nearly level or gently rolling land all the way, interrupted of course by the north channel of the stream last mentioned. The soil is a clay or sandy loam of good quality.

The timber plan indicates the distribution of the various kinds of timber. It is thus seen that the greater part of my line passed through a burnt country, the fire having gone over some parts a second time. The fire first appears to have occurred about fifteen years ago. Over this burnt country all the timber has been killed, and the burnt district extended as far as the eye could reach north of the line along the south of timber berths fifty-one, forty-three, etc., up to Salter's base line, and from information received from the Indians, I am led to believe that there is very little if any green timber, except perhaps towards the northwest, near Wahnapitae River and close to Salter's base line. Over some parts of this burnt district there has been very good pine, as is evidenced by the dead trees still standing ; the prevailing timber has been white birch, poplar, balsam and cedar ; there is now a young growth of small poplar, white birch, red cherry and willow coming up. In reference to the portions of my survey covered by green timber, I may say that the only place where pine of much value was seen, was between the Manzenazing River and the second mile post on the south boundary of timber berth number fifty-one. The trees, however, are rather under than over medium size, and much of the timber was valueless for lumber under present circumstances. Near the southeast corner of timber berth number eleven there is a small grove of very good pine, and farther west, between that and Wolseley River, there are some groves of white and red pine ; the trees, however, are of small diameter, although of thrifty growth. In the green woods along the south boundaries of numbers sixty-seven, and fifty-nine at various points, scattering pine occurs among the other timber ; there is some also at different points around Tyson Lake.

Besides the pine, the other kinds of timber seen were white birch, balsam, poplar, cedar, hemlock, maple, black birch, yellow birch, basswood, ironwood, black ash, etc. Between the south bomdary of timber berth twenty-seven and French River, and along the line running south from southeast angle of number twenty-seven, to the south channel of French River there is some very fine timber, hemlock, black and yellow birch, maple, basswood, etc. Around Tyson Lake there is much evergreen, hemlock, balsam and cedar. The Wahnapitae River is a fine stream with an average width of about one hundred and fifty feet ; it is broken by numerous rapids, but is still a fine river for floating rafts. The water is good and palatable, although of the dark color common to the streams of the country ; among the fish found in it are the black bass, pike, pickerel, etc. The Manzenazing River is a stream of sufficient capacity for floating sawlogs, although those that lumbered upon it some years ago, found it advisable to erect dams across it at several points between Collins' Inlet and Tyson Lake. Mullin and Pictou Rivers, as far as my observation extended, might each be described as a series of narrow lakes connected by a small stream broken by many rapids, and capable, perhaps, during a freshet, of floating small sized sawlogs. These streams flow in the direction of the strike of the strata, through grooves formed by the erosion of a stratum softer than those on either side of it. Wolseley River is a stream large enough to float timber at any season almost ; it has numerous expansions along its course. The water in all the streams crossed, except the mere brooks, was dark coloured, although sweet and wholesome. Tyson Lake and Manzenazing River contain pike and black bass.

Partridges abound in the woods, and some prairie chickens were shot in the brule north of French River. I saw numerous traces of bear, red deer and moose.

I have the honor to be, Sir,
Your obedient servant,
(Signed) JOHN MCAREE,
Provincial Land Surveyor.

THE NORTH WEST.

The Winnipeg *Times* says :—The industry of manufacturing lumber will no doubt be for a long time to come a large and increasing one in the Northwest, where towns and cities spring up and increase so rapidly, necessitating large supplies of lumber for building purposes. For some time past the quantity of lumber manufactured has been doubling every year, and next year the ratio of the increase will probably be still greater. A *Times* reporter yesterday called upon a prominent lumber man in this city, and obtained from him some information as to this industry.

"What are the principal lumbering firms in the Province."

"The principal dealers having offices in the city are the Rainy Lake Lumber Company, J. R. Sutherland & Co., Dick, Banning & Co., the Winnipeg Lumber Company, D. E. Sprague and Brown & Rutherford. Outside the city the principal dealers in the Province are the Keewatin Lumber Company, at Rat Portago, and Walkey & Burrows, of Selkirk."

"Where are the logs cut?"

"The logs are obtained from the shores of the Rainy Lake, Lake of the Woods and Lake Winnipeg, while some of the dealers import from the United States. The Rainy Lake Co. have 125 square miles of limits on the shores of that lake. Dick & Banning own 100 square miles on the Lake of the Woods. Walkley & Burrows, Brown & Rutherford and Stubbs Bros. each own 50 square miles on Lake Winnipeg. D. E. Sprague has a limit on the Rosseau River. J. R. Sutherland & Co. and the Winnipeg Lumber Company buy their logs from the States, the stuff being delivered in booms on the Red River."

In reply to a question from the reporter, the interviewer said the capacity of the principal mills is as follows :—Winnipeg Lumber Company, mill at Winnipeg, about 75,000 feet. J. R. Sutherland & Co., mill at St. Boniface, 100,000 feet. Rainy Lake Lumber Co., mill at Fort Francis, twenty million feet per season. Mill at Rat Portage, ten million per season. Dick, Banning & Co., mill at Rat Portage, 50,000. Walkley & Burrows, 25,000. Dr. Sprague, 25,000. Stubbs Bros., 20,000. With the exception of the Rainy Lake Co., these figures represent the capacity per ten hours. The total capacity per ten hours is about half a million feet.

"How many men are employed at those mills."

J. R. Sutherland & Co., employ about 100 ; the Rainy Lake Co. 300 ; Stubbs Bros., Brown & Rutherford and Walkley & Burrows, each 150 ; Dick & Banning 75 ; the Winnipeg Lumber Company 100 ; Dr. Sprague 50 ; or a total of a little under 800 men.

"Then there are the lumbermen?"

"Yes, I suppose that each of the above firms with the exception of those who import their raw material, would employ about double the number of men in the woods that they do in the mills."

"Heretofore," said the gentleman interviewed, in reply to a question from the reporter, "there has been a great deal of lumber imported, but now the lumbermen here are in such a position that they can supply the demand themselves, and they will soon be able to undersell the Minneapolis dealers."

"Is there any likelihood of lumber becoming any cheaper?"

"It will be cheaper for those who can buy wholesale or in large quantities, but it is probable that the retail prices will never be very much less. Those who have been buying in Minneapolis will now be able to buy here just as cheaply, and this being the case it will be to their advantarge to purchase here, the importation of lumber is becoming less every year."

"Could you give an idea of the quantity of lumber cut during the past few years?"

"Next year I believe there will be placed on the market about 125 million feet. The quantity last year was 40 millions, and this was about double the product of the previous year."

"Who are your principal customers?"

"Contractors and builders, in this city, in Portage la Prairie, Brandon and other places as far as the end of the line, and in the country west and south. Most of it is used for house-building purposes, and there is some manufactured into bridge timber and fencing.'

"Are there good facilities for floating the logs?"

"Yes, as good as can be found in the world."

"What pay do lumbermen receive?"

"About $35 a month on an average. Some first rate men can get more than this, and the pay of a foreman is, of course, considerably higher."

BUSINESS AT BOSTON.

The Boston correspondent of the *Northwestern Lumberman* writes as follows under date of Feb 1 :—Since my last letter the thermometer has been bobbing around anywhere between zero and 60 degrees above ; one day so cold and blustering that out-door work had to be given up, and the next day so warm that overcoats had to be unbuttoned to insure comfort. This variable sort of weather generally upsets business, and, on the whole, trade is rather quiet. I have not met a yard man as yet but that expresses the opinion that the spring trade will soon start up, and a great amount of lumber will be used. I think the trade is more and more coming to the conclusion that prices will not drop ; that is to any material extent. Some of the coarser grades may be shaded in price, as is alway the case where there is an over supply, but fine common and better will, in all probability, remain firm. Certain dealers are always afflicted with a chronic mania for running down prices. I can't conceive what the object can be for any person to use his best endeavors to break down prices, especially when they are not exorbitant. For the last year prices have not varied enough to prevent any yard man from selling "short," and getting out with a fair profit. At the same time, customers who have placed orders for future delivery, have had them filled acceptably. If prices had dropped how would it have been? All those orders would have been cancelled, and much trade lost in consequence. As a rule, I notice the parties who are always talking about prices dropping are either small buyers, with equally small ideas, or that class who are always finding fault with grades. The most reliable dealers we have in Boston are satisfied with present prices, and, when in want, buy like men, and do not go around the market beating down the price on a two-horse-load of lumber, and figuring if they need more of the same grade they can buy the balance of the same car cheaper. I believe the trade are becoming disgusted with

this class of trade; it certainly ought to, for it is a disgrace to any responsible concern to cater to it.

The railroads are pretty well filled up with a varied assortment of pine and hardwoods. The arrivals for several weeks past have been few. Many cars have been detained from three weeks to two months in transit by snow blockades. As to prices, on a strict market quotation, I can note no material change, although every day sales are made at what may be called very low prices, which can be attributed to several causes. First, some of the small dealers will have cars in that are paid for, and they are obliged to realize on them to meet other obligations, and I have known of cars being sold at an actual loss on this account. Again, the thickness may be unsaleable, and on that account the car may be sacrificed, but the most frequent cause is that the shipper (most low price sales being commission lots) has hurried sales to get his money, and the lumber has been sold at the best offer, which, in a dull season, is naturally small. I might add that very few cars sent on commission are A 1 in quality. Parties west sell their good lumber and ship the balance. This statement of course has exceptions, but they are extremely few.

WISCONSIN LUMBER CAMPS.

Mr. Edward Jack, Government lumber agent for the Province of New Brunswick, who has lately been examining some of the pine forests of Northern Wisconsin was interviewed lately respecting that country and its timber resources.

"Is the country remarkable for any particular kind of timber!" was asked.

"The pine there is as sound a quality of wood as I have ever seen, being remarkably free from defects of all kinds. In some places it grows so thickly that a million feet superficial of sawlogs have been cut from forty acres of land, and the country where it grows is not nearly so subject to forest fires as large parts of New Brunswick and Ontario."

"How are the lumber operations carried on in Wisconsin?"

"The hauling roads are graded in the autumn, the stumps being grubbed from the roadbed, which is levelled and skidded where there are holes; the main roads are cut wide enough to enable the teams to pass, as in many places they have two tracks, one for the loaded and one for the unloaded teams."

"Is not some trouble experienced from want of snow?"

"There is frequently not snow enough for hauling purposes, and then large sprinklers are used. The source of supply for the sprinklers is a large square tank, drawn by either two or four horses. With it the road is sprinkled where required. It is usually done in the night or every evening. Some seasons sprinklers are not used, but they are always on hand.

"Is the system of work pursued in camp the same as in Canadian lumber camps?"

"There is one chopper to two sawyers, and after the tree is chopped down the sawyers square the butt with a saw. The feller marks the length of each log and cuts off the top of the tree. The sawyers then saw it into the required lengths, the swampers, who are usually two to a team, trim the logs and swamp the roads. The logs are drawn to skid-ways, which are an inch or two higher at the front than the sleds. Where the ground suits logs are sometimes piled up eight or ten feet high. One of the swampers aids the teamster in rolling up the logs on the skid-ways. Where the rolling is heavy both swampers aid. There are two men whose business it is to load the teams, the teamster having nothing to say about it; one of these is called the "boss loader." The logs are scaled and marked on the skid-ways, so that the boss loader gets the contents of each log on its end, and the days work of each team is entered up in the log-book each night with the name of the teamster. The teams have names allotted to them in the autumn according to the teamster, and this name is preserved during the whole season, whether there be a change of teamster or not.

"The camp is usually built of logs," continued Mr. Jack, "and it is generally covered by pine splits. There are usually two windows, one at each end. In the camp there is a large box stove. The berths are arranged as in a ship, two or sometimes three deep; two men occupy each berth, and two men have three pair of blankets. This constitutes the sleeping camp. The cooking and eating camp is generally a couple of rods from the sleeping camp. In it is a large cooking stove and reservoir for water. One man cooks for as many as forty men, and he is assisted by a "cookee," whose business it is to keep on fires, attend to the sleeping camp, wash dishes, and cut wood, which is drawn up to the door for him. When water is convenient he carries it. Where the country is mountainous or hilly the men who attend to the roads sand the hills and keep them clear of snow. The teamsters' breakfast is usually over by 4 o'clock. About half the number of teams have their burdens loaded over night, and these proceed at once to the landing; the rest of the teams go to their respective skidderies with the leaders, who are provided with lanterns. They have one lantern at each end of the sled, on the side opposite the skidways; the logs are then loaded and drawn to the landing. The swampers, choppers, and others are called for breakfast soon after the teamesters have left, they are expected to be at the stump as soon as there is sufficient light to work. An alarm clock is placed in the camp by which all early operations are regulated. Socially and morally Ontario camps are for ahead of those in Wisconsin. Many residents of Ontario are now in Wisconsin, especially among the iron prospecters of the Penokee range, where extensive deposits of ore occur."

"It the fare served to the men in camp of good quality?"

"The men's food consists usually of pork, beans, beef, tea, coffee, sugar, syrup, bread, and when obtainable, potatoes are used. Frequently they use boiled rice, pies and puddings. Food is abundant and good, although the quality of the pork is not so good as that used in the woods in Canada, a great deal being distillery-fed. Horse feed is composed of hay, oats, and bran. Ground feed for horses is also frequently used; this is a mixture of corn, oats, and mill sweepings, whigh is not at all to be recommended, frequently subjecting the horses to colics."

"Logging tramways" are frequently made use of in Wisconsin instead of rails. Poles from four to ten inches in diameter are made use of. The road is roughly levelled, and these poles are placed six feet apart, and are connected by cross ties laid under them at distances of from four to ten feet. The rail is fastened to the cross ties by means of wooden pins driven through both. The trucks made use of to run on these rails have four wheels to a car. These wheels are loose on the axle, and there is three inches play between the shoulder, to enable the cars to pass around sharp curves. The rim of the wheel is hollowed out, having a flange on both sides. These cars will hold 2,500 feet of scaled logs; this load can be drawn by one horse. These tramways are used in many places in Wiseonsin. The weight of these cars, wheels and all, need not exceed 500 lbs. The average cost of constructing such roads, with rails and ties complete, is about $100 per mile."

WOODS AND FORESTS.

We take following from the annual report of the Commissioner of Crown Lands for Ontario: The sawn lumber and square and waney timber business has been active and remunerative during the past season. In my report for 1881, I mentioned the fact that the former article had realized greater value than for years past, and that prices obtained for square and waney pine, of good quality and fair average, were higher, than during any former period. It is satisfactory to be able to state that during the season just closed there has been no falling off in prices, and that the demand for all kinds of wood goods continues brisk.

The year 1882 has offered no special points for comment in connection with the administration of the Woods and Forests branch of the Department.

It may not be out of place here to mention that a meeting of the American Forestry Congress was held at Montreal in August last, at which the Government of Ontario was represented by gentlemen qualified to note proceedings and deal with points brought forward by the several speakers with regard to Agriculture generally, Practical Husbandry, Fruit Growing, Tree Planting, etc., and the officer in charge of the Woods and Forests branch was detailed to give special attention to matter relating to timber, and to means which might be suggested or proposed for the preservation of forest from fire. This subject in the original programme, was committed to a special section of the Congress to deal with, but on account of its great importance it was decided that it should be discussed at a meeting of the whole Congress. At this sitting various opinions were advanced as to the best means of preventing forest fires, and a committee of gentlemen from the United States and Canada, connected with the lumber business, was appointed to make such recommendations on the subject to their respective Governments, as might be deemed expedient. No intimation as to the measures the committee had resolved to recommend has yet reached the Ontario Government, but when made known they will receive the most careful consideration.

THE READY-MADE HOUSE INDUSTRY.

The *Northwestern Lumberman* says:—The Canadians are making such a considerable and profitable business of ready-made house manufacture that it seems strange that Americans, who have the reputation for seizing new opportunities for money getting do not branch out in this direction more extensively. True it is that the rapid settlement of the Canadian Northwest has stimulated the inventive genius over the line to devise some way to provide the shelterless new-goers on to the prairie wastes of the country with houses, and the knock-down plan of preparation and shipment has proved to be the most feasible and quickest way to meet the exigency.

Illustrative of the manner this industry is progressing, it is mentioned in the London, Ont., *Advertiser* that the Truaxes' planing mills at Walkerton, are turning out material for ready-made houses at a rapid rate. Orders for a whole row of houses can be filled in a few days, and it is not uncommon to see an entire street for Brandon or a block for Winnipeg sent out on a train 20 or 30 days after the order has been received. During the past season Messrs. Truax shipped 219 cars of knock-down house material to the Northwest. One of the partners in the concern accompanies each train, and superintends the putting up of the houses. Sometimes houses are ordered by telegraph in this fashion: "What can you furnish me a tidy cottage for, 22x40 feet, with bay window and veranda?" Next spring the enthusisastic house-builders expect to receive orders for entire villages, something after this style: "What is your lowest figure for five stores, two wagon and two blacksmith shops, one Methodist and one Presbyterian church, 25 cottages, a town hall and a lock-up, to be delivered on or before July 1?" Orders have been received for 21 houses to be put up in Brandon next spriug. The freight rate on these houses from Walkerton to Chicago is $40 a car; from Chicago to Minneapolis, $20 a car. The charge the balance of the way is enormous, owing to the lack of competition, the cost of a medium car through from the start to Winnipeg being $361. The large ones used by the Truaxes cost more. Considering the fact that Chicago is nearer Wiunipeg thau Walkerton, Ont., why cannot the knock-down house business be made profitable here, and still more so at Minneapolis, Duluth, or any other lumber point in the Northwest?

THE U. S. TARIFF.

The following petition has been presented to the two houses of the U. S. Congress:

To the Honorable the Senate and House of Representatives of the United States:

Your memorialists, citizens of..... County, in the State of.....do most respectfully remonstrate against the propositiou now before your honorable bodies, and adopted in the Senate of the United States, looking to the admission of manufactured lumber of the Dominion of Canada to the markets of the United States free from duty, to ruinously compete with a traffic giving employment to fully one million laborers and involving capital of not less than $300,000,000 in its prosecution. Urging, that the admission of Canadian lumber free from duty would but be adding the present rate of duty to the value of Canadian standing timber, opening up a competition injurious to American manufacturers, while not decreasing the cost of building material to the millions who form the consuming classes; urging, further, that so long as the Canadian Government retains the tax upon lumber imported into Canada, it is manifestly unjust to admit Canadian lumber free, while the American product, now largely in demand in Winnipeg and some other portions of the Dominion of Canada, is burdened with a tax, thus effectually giving to the Canadian product the control of the markets of this country by the admission of their lumber product free in the Eastern States, whither it is most largely imported; and as well control of the Western markets through their ability to exclude the American product, except upon payment of duties, from Winnipeg, to which their own lumber may be sent without duty.

Hemlock Lumber.

The *Northwestern Lumberman* says:—An unusual large amount of hemlock logs will be banked in Pennsylvania this winter. Hemlock lumber seems to be growing in favor, even in the older sections of the country, where it has been used for years. Never before has so much attention been paid to hemlock in Michigan as there is this season, both manufacturers and capitalists having learned that it is not the kind of timber to be sneezed at. Nothing can prevent this interest keeping right along increasing. Merit will in due time command attention, and hemlock is now receiving some of the attention that would have been proper to have bestowed upon it several years ago.

Letter from Member of Congress.

HOUSE OF REPRESENTASIVES,
Washington, D.C., Feb. 19, '82.

GENTLEMEN,—Inclosed find $1, and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a bad cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GROUT.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterhorough, Ont. w46d112l22

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery, decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by us for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterhorough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto, Ont.

CHICAGO LUMBERMEN ON THE TARIFF QUESTION.

The *Northwestern Lumberman* says :—The vote of the national senate to place rough lumber on the free list of imports has awakened much interest among the lumbermen of this city, as might be supposed. The manufacturers ars whistling a note of indifference, though it is plain that they are a little worried about its effect on their interests, while the jobbers are in the seventh sphere of elation. Thad Dean is going on a regular "bender" of jubilation, and thrusts his thumb into the vest of every manufacturer he meets, and laughs the laugh of triumph into their faces. He says the crushed jobber has done with gnawing bones, and will hercafter live on the fat of the land. He even offers to lend money to such houses as Kirby, Carpenter & Co., to help them weather the storm that he predicts will surely overtake them during the next market season.

In view of the fact that the tariff bill has not yet passed, and that a multitude of conflicting interests will have to be adjusted before it can, and that as the bill now stands it is an entirely different chicken from what it will be when the committee have done plucking at it, the jubilation of the jobbers on one hand, and the fear of manufacturers on the other, are a little premature.

Yet it is interesting to lumbermen throughout the country to know how the possibility that lumber will be placed on the frec list is regarded by some of the representative men in the trade here, and the following expressions of opinions have been obtained.

Mr. A. A. Carpenter, of Kirby, Carpenter & Co., the Menominee manufacturers, appeared to the interviewer to be quite indifferent to the lumber schedule, or its fate in the tariff bill. He said that he was in favor of a modification of the tariff, but wanted an equitable and well-considered, moderate reduction. As to the lumber duties, he thought that their removal would have no such remarkable effect on the market and trade at this point as Mr. Dean and the other jobbers were confident of. The effect, if any, would be felt in diverting some of the Saginaw output to this market, for the reason that Canada lumber might become a more powerful competitor in Eastern markets. The removal of the duty on lumber might tend to stimulate production over the border, and the volume of increase would crowd Saginaw lumber to some extent in such markets as Albany, Burlington and Oswego, and possibly in Buffalo and Tonawanda and all other Eastern points. The tendency, too, would be to enable Canadian manufacturers to discharge their surplus into different American markets whenever such occasion should arrive—it would give them a wider and more diversified field of operations. He did not seen to have arrived at a positive conclusion as to the effect of free-of-duty lumber on this market in the coming season. Mr. Carpenter, being a careful man, probably dislikes to express a positive opinion in regard to the matter in its present undeveloped state. He thought that there was was a probability that the duty on lumber would not be wholly removed, but that a splitting of the difference might be resolved on, so that when the tariff bill finally passes both houses of congress, the duty will be placed at about half what it is now. But if lumber was finally and absolutely placed on the free list, its chief effect would be to increase the price of standing pine in Canada. The difference between the cost of standing pine in Canada and the price of stumpage on this side of the line is about what the duty amounts to. Carpenter thinks that as soon as lumber is admitted into the United States duty free, both the government of the Dominion and the limit holders will put up the price of stumpage to somewhat correspond with the value of standing pine on this side. That would, of course, make the first item of cost of Canada lumber about the same as the American product, so that the only advantage the Canadian manufacturer would have over our own would be in the cheaper rate at which he can possibly procure labor and supplies, conditions that may change in the near future.

Mr. G. A. Van Schaick was found ready to speak right out on the lumber tariff question, as he generally is on any other. He always has an opinion, and is not afraid to express it or bet on it. It is not invidious to say that Mr. Van Schaick's argument generally goes with his interests. He is engaged in business for all there is in it, and he don't propose to give it away by any damaging admissions. For this reason the following opinion of Mr Dean's most ready and valiant antagonist is all on one side. He scouts the idea that Canadian lumber can make any ripple in the Chicago market. He goes directly to this conclusion by assuming that the Canadian mills are not prepared to turn out any appreciable increase of lumber, nor will they be for a year or two to come. They are set to cut deals for the English, Eastern and South American markets largely, and until their gangs are changed their output will mostly tend in the direction usual to them hitherto. Besides, all the Canadian line of trade is always from western markets, the Canadian product has been thus absorbed, and it does not appear probable that any considerable quantity of it will have to seek Lake Michigan markets. The opening of the Canadian Pacific railroad line will divert a large amount of lumber westward to supply the vast prairie region of Manitoba and the Northwest Territory, which will likely absorb the surplus of the Muskoka and Spanish river districts, while the eastern and ocean trade will take care of the Ottawa river product. Speaking of the Ottawa, Mr. Van Schaick said that he had the authority of H. W. Sage's statement that the pine on the stream was all gone for 200 miles on its lower portion, and that the cost of driving on the upper waters of the stream was so great, in consequence of rapids, that lumber manufactured from logs brought down from the region away up toward Lakes Nipissing and Temiscaminguc would not compete ruinously to American profits, even if the duty were removed. He thought also that there was some doubt about the amount of available and handy pine in Canada, especially in the Georgian Bay districts, which, if any, would come in competition with Michigan lumber in this market. As Mr. Van Schaick looked at the situation, it would require two or three years of readjustment to bring to bear the full force of Canadian competition in the Chicago market. In the meantime the Saginaw valley supply will have been reduced by 2,500,000,000, the Menominee reserve to a large extent, and then if Canada wanted to shoulder around in the Chicago market she would be welcome to do it. As for him, he should not lose a wink of sleep about the lumber tariff on or off. And as the cheerful and alert lumberman leaned back in his chair, and beamed on the representative of the *Lumberman* with complacent smile between the toes of his boots on the table, nobody could doubt his word. Mr. Van Schaick also held firmly to the view that the effect of rescinding the lumber duty would be to bull Canada standing pine to about the amount per thousand now charged on importations, which was concided in by Mr. Addison Ballard, who was present and listened to the conversation.

Thad Dean, the conspicuous among the bearish jobbers of Chicago, was decoyed into Mr. Carpenter's office, and asked to express himself on the tariff question. He was so occupied with glorifying his triumph in the national senate, and prodding Mr. Carpenter about it, that he had but little else to offer. His main hold, however, was the probability that Canadian cheaper lumber would so crowd the Saginaw "fellers," as he termed them, that they would be forced to seek a market westward, and thus the jobber would have a better chance, amid the competition and rivalry that would ensue, to buy and sell at a greater profit than has characterized the trade here for a year past.

YOUNG'S POINT.

From Our Own Correspondent.

A TRIP TO THE SHANTIES.—On Tuesday, the 23rd January, at the invitation of Mr. George Chalmers, your correspondent went on a three days trip to his three shanties, to see how the foreman and men were getting along in the woods with the great depth of snow that has fallen this winter, which is almost 3 feet deep on the level. We left on the above date for P. Cassidy's shanty No 1, about 5 miles from the shore of the head of Stony Lake, 30 miles from the Point. After crossing the lake from C. Crow's Landing, in Dummer, we arrived at the shanty and had dinner. We found an old Peterborough boy, who is fond of living away from civilization, acting as cook. This old boy, who is nearly 40 years old now, was at one time a watchmaker with Messrs. Brown & Clark, of Peterborough; he looks hale and hearty, and evidently takes his billet after dinner. We started for Cassidy's shanty No. 2, in the Township of Methuen. This shanty was built a year ago, but Mr. Cassidy has made considerable inprovement on it this winter, having made the roof higher and and more comfortable for the men. At the rear he has got a nice little office built, which is occupied by Mr. Flaherty, the clerk, the blacksmith and the foreman. All the ready made clothing, etc., is kept in this place for safety. Mr. Cassidy took us to where the logs are getting dumped on the banks of Jack's Creek; it is a fine sight to see so many saw logs all heaped together on the ice. They are a fine lot of logs. Up to the time we were there, he had about 25,000 logs cut with about 17,000 drawn on the creek. The rest were skidded in the woods. He got 9 saw logs out of one tree last Monday; the top log was 13 inches in diameter at the small end, and altogether they were 117 feet in length. He has 65 men, 12 teams and 2 yoke of oxen in the two shanties. The men are very well behaved, and Cassidy is very much liked by them. He knows the lumbering operations thoroughly, and has been foreman for several large lumbering firms. On Thursday morning after breakfast we left for Apsley, a distance of 20 miles. It was a beautiful morning, but very cold, and splendid sleighing. We passed through some fine woods, thick with pine, belonging to Messrs. Fowlds, of Hastings; Rathbun & Sons, of Deseronto mills, and Ullyott & Sadler. They are all lumbering heavily this winter. We passed three or four shanties in full blast. We reached Apsley at 11, a. m., and after feeding the inner man and horses at A. McIlmoyle's hotel we started for Dugan's camp, in Anstruther, at 1 p. m., distance 17 miles. The miles in this part of the county are all Irish miles, they are so long and full of bends—making straight roads is out of the question. We passed through some beautiful pine limits belonging to Messrs. Ullyott & Sadler; they have four or five shanties in full blast in this section. We reached Dugan's camp about 3 p. m. It appeared a long road through the woods, marshes and small lakes. Arthur was busy at work along with his men in the woods. He has got about 4,000 of the largest pine logs I ever saw cut. He has also got out a large quantity of board timber 20 to 35 feet long, which will on an average measure 80 feet. Arthur has 30 men all told, five teams and two yoke of oxen. Albert Cook is the clerk, and Tom Cassidy cook,—and a first-class shanty cook he is. He is supplied with lots of beef, pork, potatoes, sugar, syrup, and dried-apples, all of the best quality, and his motto is not to waste, but to turn out everythiug properly cooked to the men in the employ and also for the benefit of his employers. A bad, greasy, wasteful cook is an expensive item in the lumbering business. Dugan's logs and timber goes through Eels Lake, thence by Eels Creek into Stony Lake. It is to be hoped there will be lots of water this spring and summer in the creek so as to allow all the lumbermen's logs to float down. For some seasons past it has been hard work to get these down. All the dams and slides are to be put in good order before spring. We left the camp on Friday morning after breakfast—it was 33° below zero—and got to Apsley at noon. We started for the Point after dinner, very much pleased with our trip; the roads were good, but the weather extremely cold. The total distance travelled to the furthest shanty and back was 134 Irish miles.

PROTECT OUR FORESTS.

In view of the enormous consumption of timber in the United States, and the certain exhaustion of the supply; it would be well for the legislatures of the several states now in session, to pass laws regulating the cutting down of the forests, at least on public lands, and could they be made, so as to prevent the wholesale and reckless destruction of timber on private property it would be of inestimable value to our rising generations. There are portions of the country where valuable forests of pine woods still exist, but being remote from easy transportation they are being felled for fire wood, rails, and other domestic uses, when by having in each county an inspector of forests these mines of wealth could be saved from destruction. Some few of our far sighted land owners appreciate the coming scarcity of these high price woods, and are jealously keeping them, but as a rule, the ordinary farmer in search of a load of fire wood, would as leave cut down a walnut or poplar tree as one of a worthless variety for any other purpose than burning.

It should also be required by law of each land owner, in those localities where timber is scarce, to plant every year a given number of trees. By this simple legislation, if enforced, the loss, of our forests could be mitigated to a considerable extent, and beautifying the country as well.

Walnut, black locust, oak, poplar, and cotton wood are all excellent varieties which experience has taught can be cultivated successfully. They are of comparatively slow growth, though the walnut and black locust will reach a maketable size in less than twenty years, while the others mature much more rapidly.

If every farmer in the country would plant around his farm, and as subdivisions for his fields, rows of the above trees, besides doing futurity a service, he would add much to the value and appearance of his property. The amount of land lost to cultivation by this slow growing crop, and its shade, would be insignificant in a country where land is as cheap as it is in ours. Were the legislators to pass a forest protectiug law, and the farmers throughout the state aid its inforcement, and plant trees as suggested, the natural increase in our timber wealth would be far larger than any one would at first imagine.

In Spain it has been the custom from time immemorial for every person eating fruit to plant the seeds; as a consequence every highway and byway in that beautiful country teems with magnificient orange, lemon, pomegranate, peach and apple trees, bearing with each year vast amounts of luscious fruit, which is free to anyone who cares to pluck and feast upon it. This national orchard is the property of every Spaniard; because each one had aided to plant it during the past centuries. So would systematic tree planting become a national affair in America, and one which every citizen of the nation would have cause to be proud of.—*Lumberman's Gazette.*

MISAPPROPRIATION OF SAW LOGS.

The Ottawa *Free Press* of Jan. 31st has the following report :—Almost ever since the vast lumbering resources of the Upper Ottawa were first developed in years gone by, a class of individuals known as log thieves, have plied their nefarious calling along the banks of the river. Of late the illegal practice has not been carried on to so great an extent as in past years, when these purloiners made so bold as to even erect small mills in which to manufacture their ill-gotten timber. Logs to the value of thousands of dollars have been taken in this manner and sawn into boards and other timber. The high water in the spring and fall annually floats large numbers of logs on shore where they remain, and it is these that are more generally stolen. The mill and limit owners, by united efforts, have happily succeeded in exterminating this class, who have probably now turned to more honorable employment. The interpretation of the statutes in regard to stray logs has frequently given much trouble, and many cases brought by the limit owners against parties on a charge of cutting up and using stray logs for firewood, etc., have been decided adversely to the prosecution. A case has just cropped up which will be watched with interest by lumbermen. William Rowan, who lives about the Chats, in the township of Fitzroy, appeared before James Clark, J. P., in the Police Court, to answer the charge of unlawfully taking, holding and keeping in his possession a number of saw logs belonging to different lumbermen. Indictments were taken out against him by J. R. Booth, W. G. Perley, E. H. Bronson, E. B. Eddy, Sherman, Hurdman & Lord, Allen Gilmour, J. D. Gilmour and

Peter McNaughton. A. J. Christie was counsel for the prosecution and James Dowdall, of Almonte, counsel for the defendant. Jessie Smith, in the employ of the Upper Ottawa Improvement Company, laid the information against Rowan who pleaded "not guilty." Three witnesses besides Mr. Smith were examined. They were Mr. Green, manager of the U. O. I. Co., Mr. Ritchie and Mr. Hurdman. The evidence adduced clearly showed that the defendant admitted to Messrs. Smith and Ritchie that he owned the piles of wood on the shore of the Ottawa river from which were taken pieces of logs bearing the stamp of the different lumbermen who took out the indictments. The counsel for the defendant contended that his client, having a contract to supply cordwood to a Mr. Murphy, boat owner, and it was in a pile of this wood that the pieces of logs were found, he was not the responsible party. He also contended that the case should not be tried in Charleton County, as he held the wood was not piled in the township of Fitzroy, but a short distance outside.

The case was postponed.

THE SENATE AND THE TARIFF.

The action of the Senate in adopting an amendment to the tariff bill offered by Mr. Ingalls, by a vote of 25 to 23, which places lumber on the free list, naturally causes a stir among the lumber-producers of the northwest, and particularly in Michigan, where the manufacturers will, under this measure, be brought into ruinous competition with the vast Canadian forests and cheap labor. The lumber-producers of Michigan should thoroughly understand the nature of this amendment to the tariff. The Ingall's amendment, which was adopted by the Senate, repeals the existing duty on timber, squared or sided, sawed boards, plank deals and other lumber of hemlock, whitewood, sycamore and basswood, and all other articles of sawed lumber, staves of wood of all kinds, pickets, palings, lath, shingles and pine and spruce clap boards. This amendment, if accepted by the house, and becomes a law will take more than one million dollars out of the pockets of the producers of lumber on the Saginaw river alone, the present year, and more than $4,000,000 out of the pockets of Michigan producers of lumber; and it requires no great stretch of imagination to understand that a matter of three or four million dollars annually out of the pockets of the producers, will cause a corresponding reduction of the income of the vast army of workmen employed in the manufacture of the lumber. It is a very serious matter.

The close vote on the amendment in the Senate gives rise to the belief that the bill will never pass the house, and it is important that the friends and advocates of American industry in congress receive a hearty support in their effort to defeat a measure that is calculated to rob American labor of its just dues.

The board of trade, etc., and manufacturers of lumber and other forest products generally in the state, should take active steps at once to forward delegations to Washington to strengthen our members in the struggle for protection to American industries.—*Lumberman's Gazette.*

THE ADIRONDACK FOREST BILL.

The Adirondack forest bill, which has been pending in the New York legislature, and has possibly become a law by this time reads as follows:—

"Hereafter, and from the passage of this act, no sales shall be made of lands belonging to the state, situated in the counties of Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Lewis, Saratoga, St. Lawrence and Warren. Nothing in this act shall be construed as prohibiting the commissioners of the land office from conveying land heretofore contracted to be sold and not yet conveyed to purchasers thereof."

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says:—At the late meeting of the Society of Sawmill Owners and Timber Exporters it was reported that the reserve of logs usually lying in the waterways up the country over winter was nearly entirely wanting this year, the logs having already arrived at the mills. This is a circumstance to be taken notice of by importers, as any failure in the floating or delay in the arrival of the logs at the mills in 1883, would soon cause a scarcity of stock and sharp upward movement in prices. To judge from the quantity of snow that has fallen, a want of water in the river seems improbable; but, on the other hand, it will be unwise to reckon on such a floating season as the last, and consequently the inferences are that stocks will be proportionately less in autumn than at first open water.

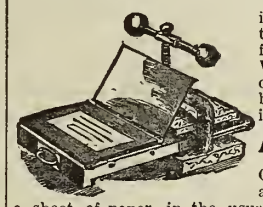
THE Montreal *Gazette* says:—A fair local enquiry exists for both hard and soft woods and former values are generally well sustained. There is also an American demand for pine for spring shipment and hard woods for immediate delivery. Dealers report the outlook for the coming year's business as very encouraging. The weather has been all that could be wished for lumbering operations in the woods and a heavy cut of logs is already reported.

AN East Saginaw despatch says a large meeting of the lumbermen was held at the Board of Trade rooms there, and a committee of twenty-five was appointed to go to Washington to bring influence to bear against the proposition to put lumber on the free list. Telegrams were sent to Chicago, Minneapolis, Muskegon, Manistee, and Lake Huron shore points urging similar delegations of lumbermen to meet the Saginaw delegation in Washington to effect unity of action.

WALTER LINTON, of Waterloo, writes that Hagyard's Yellow Oil has done great good in his family, his wife being cured of Callouse lumps that other medicines failed to remove, he he also states that a neighbor was promptly relieved of Rheumatism by the same remedy.

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestable food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

ZUCCATO'S PAPYROGRAPH



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We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.

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POSITIVELY CURED.

All sufferers from this disease that are anxious to be cured should try **Dr. Kissner's Celebrated Consumption Powders.** These powders are the only preparation known that will cure consumption and all diseases of the **Throat and Lungs**—indeed, so strong is our faith in them, and also to convince you that they are no humbug, we will forward to every sufferer, by mail, post paid, a **Free Trial Box.**

We don't want your money until you are perfectly satisfied of their curative powers. If your life is worth saving, don't delay in giving these **Powders** a trial, as they will surely cure you.

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THE CANADA

LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

Terms of Subscription:

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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. FEB. 15, 1883.

A large amount of Wisconsin pine land is changing hands. Speculators are disposing of it, and operators are securing the same for practical operations.

REPORTS from the Wisconsin pineries are to the effect that the anticipated cut of logs will be secured unless a general break-up should occur, and the same may be said to be true of Michigan.

THE Prince Arthur's Landing *Herald* says: Messrs Manning, McDonald, McLaren & Co., have a force of 1,200 men at work this winter getting out timber and ties for the Syndicate, to be used on the prairie section.

BY a provision of the new constitution of the state of Louisiana, wood-working factories, saw and planing mills, and many other varieties of manufacturing establishments, are exempted from taxation for a period of ten years, provided that not less than five hands be employed in any one factory.

MR. WM. LITTLE, of New York, has published a pamphlet on the United States "Tariff on Lumber, and the Tariff Commissions," being a review of the evidence of the Saginaw Board of Trade. He claims that the state of trade in Michigan and in Canada is very inaccurately and unfairly compared.

THE *Timber Trades Journal* says:—The timber trees blown down by the very destructive gale in October last on the estates of the Marquess of Sligo at Westport, County Mayo, have been purchased by Mr. Robert Hewson, of St. Asaph, North Wales. The fall is an immense one and will take twelve months to remove.

THE loss sustained by the Canada Lumber Company by the recent fire at their premises, at L'Assomption, is about $25,000. Of this amount $20,000 is covered by insurance in the Commercial Union and Fire Insurance Association of London, England. The former company has paid the amount of its risk, but suit has been entered against the Fire Association, which is still pending.

THE Newmarket *Era* says:—For the first time since commencing operations in Newmarket, the Messrs. Cane have got all the logs teamed in that they had cut. Another gang of men are at work now, however, chopping more trees down, and the firm intends to team them in as long as the snow lasts.—Great skidways of logs now cover the flats and there will be lots of work at the mill this spring.

THE *Northwestern Lumberman* says:—Louis Sands, of Manistee, Mich., has purchased the Cypress Hill limit, 600 miles west of Winnipeg, Man., embrasing 150,000,000 feet of pine, at a consideration of $200,000. He will build a small portable mill thereon, beginning the work about April 1. The Canada Pacific will pass within 12 miles of the limit. It is safe to say there is money in the purchase.

FRENCH cabinetmakers are constantly on the elert to secure the beams and timbers from buildings in course of demolition. In pulling down a house in Paris recently, in addition to the large sum realized from this source, a hoard of 300,000 francs was discovered in the walls, while works of art were hidden behind the wainscot. All the woodwork of the house was bought by cabinetmakers and decorators.

THE Georgian Bay Lumber Company are having a fine new tug boat built at Port Severn to do their work on the river above the mill. The vessel will be 65 feet long by 14 feet wide. Mr. James Storey, of Collingwood, is contractor. The company are also erecting a fine large boarding house, two storeys high, 30x70 feet, with wing 24x24. It is expected it will be completed by the time the mill starts, in the spring.

MR. T. H. SHEPARD, who has charge of the lumber camps of the Rainy Lake Lumber Company, arrived in Winnipeg, lately. He states that by the spring over 20,000,000 feet of logs will be cut in the woods there. Two hundred and forty men engaged in the woods and the company has thirty-five teams in the bush. The saw mill at Rainy Lake is being enlarged, so that an extra number of men will be engaged next summer.

THE Wilson Hoop Company's factory, at West Bay City, Mich., is now turning out 120,000 barrel hoops and 25,000 short hoops per week, and the company expects to have on hand next spring 3,000,000 hoops. Elm timber is used, largely hauled in by farmers in the surrounding country. This timber growing profusely along the river, was once considered nearly worthless, but hoop-making has furnished a use for it. A considerably quantity of elm also comes in by rail.

A correspondent of the Buffalo *Lumber World* writing from Johnsonville, S. C., incidentally mentions a curious instance of the influence of animals in controlling or preventing forest growths. It appears that the fondness of hogs for the juicy roots of young pines leads them to seek them assiduously, so that where hogs are allowed to roam in that region one can hardly find a young long-leafed pine in a thousand acres of pine forest. There being no young trees to take the place of the old ones used up by the lumbermen and turpentine gatherers, that species of pine timber is rapidly being exterminated.

THE Minneapolis *Lumberman* has this to say of a gentleman who formerly operated chiefly in this city: W. C. Yawkey, of Detroit, Mich., a lumberman who is worth over half a million, has been attending the St. Cloud land sale, and has invested quite liberally in pine lands. He also, in partnership with Judge Evans, purchased lands on the Wisconsin, on which there is about 95,000,000 feet of standing pine, and none of which requires over a three-mile haul. It is believed that the gentleman cleared $100,000 in the operation. Mr. Yawkey has sold a vast amount of his Michigan lands during the past year, and the *Lumberman* would not be surprised if both he and Judge Evans decided in the not distant future to locate in Minneapolis.

THE Ottawa *Free Press* of February 9th says:—We are informed that the British and Canadian Lumbering Co., headquarters in Toronto, have purchased the extensive saw mill near this city, known as Skead's mill. The sum is said to be in the neighborhood of $100,000. The transfer is likely to be of great benefit to this city, as the company purchasing is a powerful concern and will, we are assured, run the mill to its full capacity. Shipment of lumber will likely be made by railroad.

THE Prince Arthur's Landing *Herald* says: We understand that L. Belanger has the contract for taking out the timber and erecting Marks' new mill, the dimensions of which will be 100x40 feet. The steam hammer is busily engaged putting down the piles for the foundation. It would not be at all surprising to us, judging from the way things are shaping at present, if a transfer of the Canadian Pacific Railway between here and Rat Portage would be made from the Government to the Syndicate at an early date.

A SHORT-SIGHTED POLICY.

To the Editor of the Canada Lumberman.

DEAR SIR,—Your valuable paper is doing a good work by encouraging all thinkers and lovers of our country to look into our future welfare regarding our demand and supply for lumber, and by many able remarks about tariffs, and the protection of forests, all of which should be our first duty to think of—who have the faculty to think at all. I may be pardoned for mentioning one or two facts which, perhaps, have not come under the notice of the public, and it is time they did. Lately our streams and the river St. John are threatened to have a regular slaughter carried on in our short lumber trade, shingles, and clapboards, by Americans. They have built and are building mills to manufacture our cedar and clapboard stuff, which if allowed to be carried on they will, before six years, cut and carry away all our stock of short lumber, and manufacture it on the American side to save the duty, and build up American mill owners and capitalists, instead of our own, and damage our future short lumber prospect, which is now our only dependence in the lumber line to help us build up our country with mills and manufactories. I find no fault with the tariff, but I blame the Goverment for not enforcing it. We have laid down in the tariff one dollar per cord on shingle bales and one dollar per M. on spruce and pine logs, export duty, but our Finance Minister will not enforce it. So here we are giving a premium of one dollar per M. on logs, and one dollar per cord on shingles right to Brother Jonathan to come over the lines and slaughter our lumber to help build up his country, and damage our own. On one stream there will be three million cedar got out to stock one mill on the American side, besides the clapboard lumber, and I may venture to say that much more is being got out in other parts for the same purpose, to save American duty. No doubt over fifty million shingles will be manufactured out of the Province limits this year, besides the host that was cut before and went scot free, we may put at three million feet of cedar cut on one stream at the least, nine million cords, and at one dollar per cord we are losing nine thousand dollars of a revenue robbed from our streams besides the clapboard lumber. The above will show to any man of sense the necessity of entering a complaint and having the slaughter of our forests looked into by the proper parties paid for doing their duty.

Respectfully yours,
A PROTECTIONIST.

Little Falls, Madawaska.

THE ADIRONDACK WILDERNESS.

The need of saving the woodlands of the Adirondack wilderness, out of which flow the Hudson River and other streams of great commercial, manufacturing and sanitary value to the State, has long been recognized by observing and thoughtful citizens. The outer and more accessible portions of the original forest region have long been stripped of their timber, and vast areas of little use for agriculture have thus been made treeless and barren. So long as the forests of Maine and Michigan and other wooded regions in the North and West were able to supply timber at a less cost for transportation to market, the remaining Adirondack forests were practically protected from the inroads of lumber men. That protection they are rapidly losing, and quite recently vast tracts of heavily wooded lands in that region have passed into the hands of timber cutters.

There is no question that the general clearing of the Adirondack region of its protecting forests would produce effects of the most disastrous character to the valleys of the streams flowing therefrom, effects like those which, during the past few months, have brought death and desolation to so many European river valleys. The rainfall of the Adirondack region is great, the drainage slopes steep, and without the controlling and restraining influence of the existing swamps and forests about their sources, the rivers which drains this northern wilderness would show only great and sudden alterations flooded and empty channels, destructive at once to the agriculture of their valleys, to the manufacturing interests which cluster along their banks, and to the commerce of the Hudson, the channel of which has already been seriously obstructed by the detritus washed in from unprotected hill slopes and other spaces stripped of their original forests.

It is gratifying to note that the State Legislature, or rather the Senate, has taken ground against the further invasion of the Adirondack forests, at least for that part of the region under State control; and it is much to be hoped that the Assembly will do as well. Senator Frederick Lansing's bill, forbidding the sale of 660,000 acres owned by the State in the Adirondack region, was passed by a vote of 24 to 5, January 23. It is a good indication of increasing public appreciation of the need of preserving the wooded character of that part of the State. The timber there, if cut at all, should be cut only under rigid control, and with the most careful provisions for immediate rewooding of the cleared ground.

STEALING A MARCH ON THE DRIVE.

Since December 14, 1882, the C. N. Nelson Lumber Company, of Stillwater, Minn., has been doing an extensive log-shipping business over the St. Paul & Duluth railway, from Mission Creek station to Stillwater and Lakeland, for the purpose of getting logs to start its mills with in the spring before the drives come down. It is a novel move in the logging industry of the upper country, and it is thought that, if the plan works satisfactory, lumbermen in the St. Croix valley will not depend so much on the streams for log conveyance hereafter. Really, there is no reason why logs cannot be run to mill by rail in Minnesota and Wisconsin as well as in Michigan, where vast numbers of logs are conveyed on the Flint & Pere Marquette, the Mackinaw division of the Central, and other railroads. The C. N. Nelson Lumber Company will ship to Stillwater about 4,000,000 feet by rail, continuing the movement till Apil 1. The cost of rail shipment is about $1 a thousand more than by water, or $4,000 for the 4,000,000 feet. But the company no doubt expects to make up this additional cost by getting in ahead of rivals on the spring cut. It intends to have a quantity of lumber dry and ready for sale while the other fellows are driving the streams.—*Northwestern Lumberman.*

A FORESTRY BILL.

A bill known as the "Dakota Foresty Bill," has been introduced into Congress. It provides for the granting of 400 sections of unappropriated lands in Dakota to the coming state, to be immediately selected by the Secretary of the Interior, appraised and sold at their appraised value on ten years' annual payments, no deeds or patents to be given to the purchasers until after they have planted at least twelve acres of forest trees on each quarter section, and kept them in a good growing conditiou for at least eight years, the trees to be planted at such place or places on the quarter section as shall be designated at the time of the purchase by a Forestry Commission, for which the bill provides. The money derived from the sale of the lands is to form a fund, to be invested in Government bonds or other good securities, the interest on which is to be used for the establishment and maintenance of a school of forestry

and experimental stations. This institution is to be under the supervision of a board of three commissioners, two of whom are to be practical foresters, appointed by the president and confirmed by the Senate, and one appointed by the governor of the state of Dakota and confirmed by the highest branch of state legislature, the commissioners to hold the office for ten years, or during good behavior. If the proceeds of the lands sold for this purpose exceed $200,000, the excess is to be used in the construction of buildings and establishing of experimental forestry stations, if it be found necessary to do so. It is not expected that it will become a law by passing this Congress, but it is intended to press the matter in successive sessions.—*The Lumber World.*

DESERONTO.

The Belleville *Intelligencer* gives a full account of Messrs. Rathbun & Sons' mills at Deseronto, from which we take the following extracts:—

"The noise produced by the echo of the hammer and the movement of the hand-saw, greets the ear, as one approaches the vicinity of the big mill and on entering it the whizz of activity becomes conspicuously apparent. Here is a gang of stone cutters; there a party of masons; scattered promiscuously are laborers who distribute material where it is required. Carpenlers and joiners ply their avocations and tend their contributions to the hum that is all pervading.

The mill originally was 90x150 feet. An addition was subsequently made to it of 30x70 feet, and an extension of a like size is now being added. The exterior of the original building—or all that was left of it, that was in good condition—still stands; the contents of the interior have gone with their usefulness—to be supplanted with what is modern and better adapted for quick despatch and better progress. "To be abreast of the times" is a motto that the enterprising firm of Rathbun & Son aim to achieve, and, as a result, all the newst and most approved mechanical devices, innovations and appliances that can be procured are theirs. The firm is an embodiment of push and with capable and efficient managers controlling each department and a systematic style of management, it is not to be wondered at that the firm has gone on and prospered as it has. "It has resurrected Deseronto" and the mills are the life of the village. All the foundation timbers of the big mill are new; all the floor timbers are new and the flooring will be new. Two new abutments for the two new gangs, 18 feet square and nine feet deep, made of cut stone obtained near Shannonville, have just been completed. They rest on a foundation of oak, and the bolts by which the machinery is to be fastened go through them. The gangs will be of the most approved pattern—the Wicks Bro.'s patent. They possess an excellent motion created by oscillation, and are considered superior to anything in use in similar establishments in Canada. The rigging is very strong and durable, and is of cast iron. These gangs, instead of cutting one log at a time as formerly, will dissect six. Canting is dispensed with, as the stuff is carried by live rollers. The cut is taken by transfer chains from the slabbers to the gangs, instead of being handspiked as formerly. There will be two slabbers for one of the gangs, and a pair of twin circulars for the other, that will slab the sides of the logs. The machinery outfit of the mill will comprise an improved slabber, two gangs, two slabbers and two new circulars, all of the most improved type. All the cut will be transferred by machinery, and from the time a log leaves the water, no hand will touch it until the lumber is on the pile ready for shipment. The work of renovation was begun on the first of January, and will be finished by the first of April. Fifty men are employed in putting the mill in order, and the labor, improvements and machinery will cost $60,000. When the mill is in motion, it will cut 250,000 feet of lumber per day. The lath mill is an adjunct of the big mill and is now being provided with new machinery, which has been procured from Ottawa and other points in Ontario. In addition to turning out stuff for heading, sashes, blinds and panel material, it will daily contribute 150,000 lath. In the cedar mill there are 115 men and boys employed. Here are made lath, shingles, box stuff, ties and dimension timber of almost any size and length. The machinery in this is of the best pattern extant. The sash factory gives employment to 120 men and fills demands from all parts of the universe. It recently received an order for 1,000 glazed sash and 1,800 doors which are to be sent to South Africa, and is daily burdened with calls for doors and mouldings throughout the Province.

The Welland Vale works have given an order for 10,000 axe boxes, which are being made in the sash factory.

An immense quantity of lumber is piled along the docks.

Orders for house building material are numerous. "Necessaries" for eight structures have been provided during the past month.

An electric fire alarm system has been perfected by Mr. Rathbun and is in operation in all his places of business.

When the chemical works are in operation, the mills will be lighted with gas.

NEW BRUNSWICK'S FOREST WEALTH.

The St. John *Telegraph* of the 1st inst., states the clearances of lumber for trans-Atlantic ports from St. John for January, 1883, to have been as follows:—

Deals, battens, deal ends	3,910,839 sp ft.
Scantling and boards	41,379 "
Pine	300 tons.
Birch	272 "

The shipments were made in eight vessels of 5,047 tons. The largest shipment was to Bordeaux, to which port went 1,300,418 feet of deals and 40,998 of scantling and boards. Discoursing on "our forest wealth" the *Telegraph* says:—

The annual cut of spruce and pine lumber in this province, including what is used for domestic purposes as well as what is shipped abroad, probably averages over four hundred millions of superficial feet. The shipments last year of deals, etc., amounted to 375,864,368 sup. feet, and 45,000,000 sup. feet are estimated to be held over. The stock wintered over last season was 33,000,000, so that we find the cut for last year was 387,864,368 sup. feet, exclusive of the amount required for home consumption. How long the lumber lands of the province can stand this enormous drain is a question not readily answered; but it is evident that sooner or later the important industry of the manufacture and shipment of deals will be greatly curtailed. Under careful management, such for example as Mr. Gibson gives his reserves on the Nashwaak, the supply of spruce can be considerably prolonged, and it is to be regretted that no proper system of forestry has been adopted by the province, such as obtains in European countries, and is fitted to secure the co-operation of the lumbermen in the conservation of the forests. In view of the constantly increasing demands for lumber of all kinds on this continent, and the rapid exhaustion of the forests in the New England and Northern States, it is gratifying to know that this province possesses a vast store of wealth as yet comparatively untouched. The hardwood lands, of which there are millions of acres as yet unexplored, will, in the near future, take the place, in part, of the spruce lands.

It is impossible to give even a vague estimate of the amount of merchantable hardwood in this province, but it is enormous, and when it begins to find a market its manufacture will give employment to much capital and labour. In the northern part of the province alone there is a belt of land, irregular in outline, and broken by softwood land extending from the rear of the settlements on the St. John to those on the Bay of Chaleur, and containing fully two millions of acres, clothed with a forest of certain future value, and in every county there is more or less country of the same class. At the very moderate approximation of one thousand superficial feet per acre, the total amount of merchantable wood will be seen at once to be immense.

Wood and Coal.

The relative value of wood and coal has been made the subject of scientific investigation. It is stated as safe to assume that two and a quarter pounds of dry wood are equal to one pound of average quality of soft coal; and that the fuel value of the same weight of different woods is nearly the same, when dry; that is, a pound of pine is equal to a pound of hickory. The different woods weigh as follows, per cord: Hickory or hard maple, 4,508 pounds; white oak, 3,850 pounds; beech, red and black oak, 3,250 pounds; popular, chesnut and elm, 2,350 pounds; average of pine, 2,000 pounds. The value of these woods for fuel, as compared with coal, is given as follows: One cord of hickory or hard maple equals a ton of coal; white oak, 1,715 pounds; beech and red and black oak, 1,050 pounds; average pine, 925 pounds.—*Northwestern Lumberman.*

WORTH KNOWING.—A Fact Worth Knowing. The best household remedy known for Coughs, Colds, Bronchitis, Asthma, Whooping Cough and all throat and chest troubles tending toward Pulmonary Consumption is Hagyard's Pectoral Balsam, to be procured of any druggist.

DOORS, MOULDINGS, Etc.

WANTED AN AGENCY FOR ENGLAND for the sale of the above, by a gentleman with experience of the trade, large connections, and first-class references. Has worked the American Joinery for England for some years. Address D. M. 270, Messrs. Deacon's, 154 Leadenhall Street, London, England. 1L4

FOR SALE!

The MURRAY BAY LIMITS

COMPRISING ABOUT

330 SQUARE MILES.

These limits control the whole territory on the Murray River. The limits are very valuable, heavily timbered with Spruce and Pine, interspersed with valuable hard woods, Poplar and White Birch. Apply to

D. C. THOMSON,
QUEBEC.
4L3

NOTICE.

SEALED TENDERS addressed to the Superintendent General of Indian Affairs, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of SATURDAY, 10th MARCH, 1883, for the delivery of the usual Indian Supplies, duty paid, in Manitoba and the North-West Territories, consisting of Flour, Bacon, Groceries, Ammunition, Twine, Oxen, Cows, Bulls, Agricultural Implements, Tools, &c.

Forms of tender and full particulars relative to the Supplies reqnired, can be had by applying to the undersigned or to the Indian Superintendent, Winnipeg.

Each Tender must be accompanied by an accepted Cheque of a Canadian Bank for at least five per cent. on the amount of the tenders for Manitoba, and ten per cent. on the amount of the tenders for the North-West Territories, which will be forfeited if the party declines to enter into a contract when called upon to do so, or if he fails to do the work contracted for. If the tender be not excepted the cheque will be returned.

The lowest or any tender not necessarily accepted.

[No newspaper to insert without special authority from this Department through the Queen's Printer.]

L. VANKOUGHNET,
Deputy of the Superintendent
General of Indian Affairs.

Dept. of Indian Affairs,
Ottawa, 30th Jan., 1883, 2L4

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

25 in ball and 5 in heel are the numbers usually required.

PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

T. McAVITY & SONS,
Dealers in Lumber and Mill Supplies,
ST. JOHN'S, N.B.
3L6

LUMBER

Shingles, Doors, Sash, Flooring, &c.,
WANTED,
STATE QUANTITIES AND PRICE TO
SHORE & DAVIS,
Head Office, 514 Maine Street, Winnipeg, Man.

MINNESOTA PINE LANDS FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF

8,000 ACRES

Of PINE LANDS, in St. Louis County, Minnesota, carefully selected and estimated to cut **FORTY MILLION FEET**, well located on good driving stream, tributary to Duluth.

A. McCALL,
6L1 Lumber Merchant, Simcoe, Ont.

PUBLIC NOTICE

TRADE MARKS. TESTED

Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

J And Beam Engine Marks.

It having come to the knowledge of Messrs. Thoma Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of J and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.

Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,
EAST PARADE,
SHEFFIELD, ENGLAND,
Solicitors to the said 6L3

THOMAS JOWITT & SONS

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily, and honorably. Address TRUE & Co., Augusta, Maine.

DISCUSSION ON TREES.

We take the fol owing from the annual report of the Fruit Growers' Association, of Ontario:

MR. BEADLE.—With regard to trees for towns and cities, the best growing tree, and the one which has been the most popular on that account, is the silver-leafed maple. It is sometimes called the soft maple, but there are other soft maples. The botanical name is *Acer dasycarpum*. It grows so fast that sometimes the branches split during high winds, and I have found it necessary to take the saw or the pruning knife to the trees and head them back so as to make them grow more compactly. If this were not such a fast age, and we were not in such a hurry to have shade trees, I would prefer the sugar maple. It is a more cleanly tree, if possible, than the silver maple. It does not sprawl much; it has a brighter and closer foliage, and, I think, is more symmetrical and beautiful to the eye. If you ask me what tree I would take next to that I get puzzled. There are several trees. There is a tree that we call the the ash-leaved maple. It is not a maple; it is not an ash. Botanists have put it under the head of *Negundo aceroides*. It is a hardy tree—I suppose a more hardy tree than the sugar maple. It will grow as far north as any tree can grow. It dres not make as large a tree as the sugar maple. It makes a very pretty medium-sized tree with a rather compact head and pinnate leaves. The prettiest native evergreen for ornamental planting is what is commonly called the hemlock, but it needs to be planted with some care. It needs nurses. If you take one hemlock tree in any part of the country and set it out on the lawn by itself, ten to one but it will die out; but if you will plant a little group of trees—a hemlock to each three or four Norway spruce—and let them grow together, and gradually cut out your Norway spruces so as to have a clump entirely of hemlock, after a while you will have one of the most graceful groups of the prettiest of all the evergreen tribe. Our balsam fir, while it is young, makes a pretty ornamental tree, but when it gets to be twenty-five or thirty years old it loses its lower branches and ceases to be an object of beauty. Our white spruce would be my choice in preference to the balsam fir. I think it will holds its limbs pretty well. It certainly will hold its limbs at the ground much longer than the native balsam. The Weymouth pine—our common pine—is a beautiful thing; but you ought not to plant it on small lawns. It is a beautiful tree planted alone, and allowed to have free scope to develop itself. Will it pay to plant the black walnut for commercial purposes? I suppose there are none of us who can speak from experience. If a man has a piece of land that is suitable for the black walnut and not so very suitable for tillage purposes, being broken and uneven, I believe that it will pay a person well who will take care of a plantation of that sort for twenty-five years. The wood, as we all know, commands a very high price in the market for the sake of the lumber it makes. It is continually growing scarcer, and the price is going up. I can see no reason why a plantation of that kind well taken care of should not pay well. I have heard it said that the nuts ought to pay something. If you go to a grocer in town and ask him for a bushel of black wal nuts he will charge you half a dollar for them; but I think you could scarcely sell ten bushels of them if you wanted to. Will it pay to plant the white ash for commercial purposes? We know that wood is used for almost everything, agricultural implements, carriage making—in every useful branch of industry where woodwork is wanted the white ash will come in play; and, I believe, under the same circumstances where black walnut might be made profitable white ash might be too. To the westward of us, in the United States—in those treeless prairies—they are planting the white ash very freely. They have great faith in it as a tree for forming shelter belts, as well as a timber tree. I believe the hickory would also pay. The nuts of that will sell for something. I do not know what the market price is. I know that the wood is being sought for for various purposes—for spokes of wheels, for felloes also, I believe—and for hammer handles, and that sort of thing. I believe a plantation of hickory on broken soil—on ground suitable for it—would be a profitable investment for a man to make. I think the time is coming when these subjects should be agitated and discussed. It would not take long to compute how much lumber you could get off a given acreage by knowing a little of the growth of these trees. I have been told about the hickory, that the demand for hoops is becoming so great that it would pay to set out a thick plantation of hickory trees, let them grow to perhaps a little thicker than your thumb, and then cut them down and split them in two hoops.

MR. DRURY,—There is one native evergreen which I think the secretary has overlooked—that is, the cedar. I was not aware, myself, until this last summer, that it was possible to get it to present such a fine appearance—not until I had an opportunity of visiting the farm of Mr. Dawson, in the county of Kent, about a mile from Chatham, There I saw cedars carefully trimmed and pruned to the most beautiful shapes. Of course, we know that if we allow a tree to grow as it will, without any pruning or shaping, it is not likely to present a very attractive appearance. The cedar is a tree that could be used for hedges. I do not say that it would be a lasting tree, but I have known it to last as a hedge for twelve or fourteen years. I saw a hedge of that sort on Mr. Dawson's farm. Near my own place a large orchard is partly enclosed by a cedar hedge, and it presents a very nice appearance. Then, too, I think the Secretary has hardly placed the spruce in its proper position as an ornamental native evergreen. The spruce, in my opinion, is one of the very finest native evergreens. Its color is very pleasing, and without giving it any attention it will grow into a very nice shape. I fully agree with what he has said in regard to the hemlock. The white pine also is a tree that can be pruned into shape. I have seen a very nice little arbour made by planting four or five pine trees in a circle, and then trimming the inside and the outside. This can be seen on Mr. Dawson's farm. I am disposed to think it would pay just at present to plant the white ash for commercial purposes, because it is a tree that is growing in considerable numbers in various parts of the country already.

MR. BEADLE.—Is it the red cedar you are speaking of?

MR. DRURY.—No; it is the white cedar—the *abor vitæ*.

MR. BEADLE.—It is the *arbor vitæ*, but not the white cedar; what is known by botanists as the white cedar does not grow here. The *arbor vitæ* would make a very pretty hedge, and bear trimming as you have said.

MR. BEALL.—Questions have very often been asked me within the last year or two as to what size the black walnut will attain in a given number of years. I have been endeavoring to find some answer to the question, but I have not succeeded very well. I am hoping, however to get more correct information from England on that subject. I think the probabilities are that there are English authorities more reliable than anything we have in this country as to our Canadian black walnut. We find that the Canadian black walnut was introduced into England in 1656; and I know of one tree that is about 153 years old, standing in England at the present time. That tree it now upwards of five feet in diameter. It is at Fulham Castle. It is now in a perfectly healthy condition.

MR. DEMPSEY.—We have in our neighborhood a black walnut tree—I could not tell you the age of it, but it is very little less than two feet in diameter at the base of the trunk. The limbs branch low—probably six or seven feet up. I asked the present owner of the property how old it was. He said, "Oh, I don't know; it must be about 120 years old, I think." I asked him how he knew. "Why," he said, "it was planted by my grandfather." "But," said I, "the county has not been inhabited more than seventy years." I think it was probably planted about seventy years ago. There is another tree I took Mr. Beall to look at, it is planted in another part of our county, which would make about two standard sawlogs. That tree also must be about seventy years old. There is a hickory tree that stands very near my house on a neighbor's premises, which forty years ago I saw an uncle of mine pruning up. It was a little bigger than my thumb at that time. That tree has more than twenty inches of diameter of trunk now. The whole tree is not standing; it forked, and in a heavy gale of wind it split down, and half of it has failed. I fancy that the black walnut or hickory could be brought up in thirty years—perhaps twenty years—to quite a commercial size, and I believe it would be profitable if properly cultivated; but it would be necessary to cultivate close so that the branches would not lie too low.

THE LUMBER TARIFF.

The Chicago *Northwestern Lumberman* of Jan. 27, says:—On Monday of this week, during the progress of the debate on the tariff bill in the Senate at Washington, the duty on lumber was discussed, mainly by Mr. Conger, of Michigan, and Mr. Van Wycke, of Nebraska. The Michigan senator, of course, favoured a continuance of the present duties on lumber, and the gentleman from Nebraska voiced the opinions of his prairie constituency. It is to be remarked that Mr. Conger held that there was still timber enough in the country to last 50 years, which hardly comports with Mr. Sargent's eight-year theory, that he is so industriously circulating in eastern journals. Neither does it accord with the position taken by the stumpage owners a year or so ago, when they desired to bull the market for both raw and manufactured material. There is a peculiar mixture in the motives of the pine interest these days, mainly owing to the tariff question. Before it came up in the present Congress there was scarcely a a stumpage owner to be found who did not predict the early extinction of the pine forests. That cry was on the wrong track as soon as the commission began to use palace cars and the club room at the hotels. It was then discovered to be logical that if our pine supply was becoming rapidly exhausted, free Canadian lumber would supplement it, and for that reason the consumers, especially in the timberless regions of the west, would have a right to clamor for the removal of duties on the Canadian product. Hence we find the pine interests blowing hot and cold nowadays—Mr. Conger, the Michigan valiant, stoutly maintaining in the Senate that the supply will last 50 years, while the lesser lights, like Mr. Sargent and his agents, and individual pine owners, who have not yet "got on to the racket," are still insisting that the pine forests of the country will have been utterly slaughtered in eight years.

The fact is that few outside the Saginaw valley interest, which Mr. Conger represents in the Senate, care much about the duty on lumber, for the reason that Canada lumber can never come into lasting and serious competition with the product from Lake Michigan westward. New York, New England and the Canadian Northwest will absorb the larger share of Dominion lumber, and there will be but little need for the mill men and merchants over the border to come west in search of customers, except in instances where there is special demand or local scarcity.

The success of Mr. Ingalls' motion to amend the bill so as to admit squared timber and sawed boards free of duty, was certainly a triumph for the advocates of free lumber, so far as the Senate is concerned. The action of the house in the matter, and the final fate of the amendment, will be awaited with much interest by all who are interested in pine.

FANCY WOODS.

The development of taste in matters relating to the internal woodwork of houses has of late years spread to floors, and parquetry floors have become the fashion. It may be expected that future taste will extend to the selection of coloured woods for the making of floors, and ere many years we may see such woods as mahogany, ebony, rosewood, walnut, teak, greenheart, birch, &c., bleuded together for the production of an artistic floor.

Judging from the direction public taste has of late followed, we should say that the business of the "fancy" wood merchant will develop in future years, and that instead of coloured woods being as now to a very great extent exclusively employed for cabinet purposes, they will be made very general use of for the internal woodwork of better class dwelling-houses. When the practice of introducing coloured woods into houses becomes generally adopted, the business of the "fancy" wood merchant will enormously develop, and then the tropical forest of Central America will be called upon for new large supplies.—*Timber Trades Journal.*

SOUTHERN PINE FORESTS.

The *Lumberman* will be much oblidged to one of its many readers in the south, providing he knows, if he will explain the absence of small pine trees in so many of the the yellow pine forests. This state of things is remarked on by every observer who visits the yellow pine woods. Several reasons have been given, but to the *Lumberman* they are unreasonable reasons. One is that the hogs, which are so abundant in the southern woods make food of the roots of the small trees as soon as they are old enough to have roots, and another is that the annual burning over of the forest lands destroys the young trees. When traced up, the hog theory is a poor one, for if yellow pine trees sprang up in the southern woods as white pine does in the white pine regions of the North, all the hogs would be kept very active, even if they set about to make the killing of the little trees their life work. The other theory is fallacious from the fact that in forests that are not burned yearly there are no young trees. The writer of this has ridden over thousands of acres of forests in the South that were so devoid of any kind of underbrush that it was difficult to get enough branches with which to decorate the horse's head. In the Northwest small trees are so plentiful that thousands, and probably millions, of them are cut annually when making roadways. The lumber business is a comparatively new one in the South, and considering the small number of infant trees found in the forests there, it is at least interesting to speculate as to what extent the forests, when once cut off, will reproduce themselves.—*Northwestern Lumberman.*

Managing Belts.

A mechanic gives the following directions for managing belts. He says: "I have for the last twenty-five years, on every Saturday evening, turned the inner side of my engine belt outside, let the engine run slowly, and washed the belt well with warm water and soda, applied with cotton waste. Next I take a piece of sheet metal and scrape the belt well, then wash with clean warm water and dry off. I collect the waste off from the shafting and apply as much of it to the belt as possible. The washing must be done as quickly as possible, so as not to dissolve the glued parts. I let the belt stand on the pulley till Monday, then give another scraping and turn the belt as before. I keep the pulleys very clean. I have long been surprised at the economy I have affected with very little trouble. I have not bought a new belt for the last ten years. There is an engine near me 14 inches by 36 inches (mine is 12 inches by 36 inches.) I have nearly double the shafting and belt, and my neighbor cannot run with less than 38 pounds of steam when all the belts are on loose pulleys. Mine will run at full speed with five pounds."

Art in Furniture.

In art furniture this country is steadily advancing. Cumbrousness has long been banished from our homes. Our furniture makers prove themselves fully equal to the production of the stately and picturesque furniture of the Elizabetian period; in addition to original designs free from all incongruousness effects. This country is rich in furniture woods, beautiful in grain and exceedingly diversified in color, ranging from the palest maple to the deepest and most lustrous hues.—*American Lumberman.*

LITTLE BY LITTLE.—The constant dropping of water will wear away even the hardest stone. So the constant irritation of a cough will so wear upon the lungs as to induce incurable Consumption. Hagyard's Pectoral Balsam will cure the worst cough, speedily and effectually.

MR. THOMAS W. RACE, Editor and Proprietor of the Mitchell *Recorder*, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Billiousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Dec., and for the first 12 months of the year :—

MONTH ENDED 31ST DEC., 1882.

	Quantity. Loads.	Value. £.
Timber (Hewn).		
Russia	7,660	17,605
Sweden and Norway	24,409	39,566
Germany	16,026	46,974
United States	5,252	21,746
British India	2,499	35,210
British North America	29,550	146,065
Other Countries	35,936	40,784
Total	121,332	347,950
Timber (Sawn or Split, Planed or Dressed).		
Russia	26,747	63,543
Sweden and Norway	56,507	147,868
British North America	90,378	233,590
Other Countries	18,592	60,254
Total	192,224	505,255
Staves, (all sizes)	6,992	39,120
Mahogany (tons)	2,777	27,554
Total of Hewn and Sawn	313,556	853,205

12 MONTHS ENDED 31ST DEC., 1882.

Timber (Hewn).		
Russia	299,588	629,626
Sweden and Norway	609,187	968,906
Germany	297,031	844,425
United States	155,422	544,215
British India	39,918	512,339
British North America	277,745	1,348,564
Other Countries	339,516	429,748
Total	2,018,407	5,277,823
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,178,318	2,971,737
Sweden and Norway	1,652,933	4,156,456
British North America	1,010,413	2,692,049
Other Countries	335,096	1,072,008
Total	4,176,760	10,892,250
Staves (all sizes)	125,696	647,227
Mahogany (tons)	36,004	351,000
Total of Hewn and Sawn	6,195,167	16,170,073

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says :—The one great determining fact which stands boldly out in relief is the enormous production of sawn and planed lumber in Sweden in 1882, and which was doubtless greater by over 100,000 Petersburg standards than in any preceeding season. This is clear from the following comparative return of export for the first eleven months of the last six seasons, viz. :—

	1882 Stds.	1881 Stds.	1880 Stds.
Sawn and planed wood	715,000	611,000	632,000
Hewn wood	105,100	89,700	102,600
	1879	1878	1877
Sawn and planed wood	620,000	556,000	637,000
Hewn wood	72,500	74,000	111,000

(The hewn wood is calculated per standard of 150 and the sawn, &c., per standard of 165 cubic feet.)

Estimate of first open water stocks of sawn and planed wood in the north of Sweden :—1882, 356,252 standards ; 1883, 404,704 standards.

The above results have been rendered possible by the uncommonly successful manner in which floating was carried on in the past season, as well as by the long and favourable shipping period. This immense export could not naturally fail to bring prices down somewhat towards the close of the season from the comparatively high limit at which the larger productions were mostly sold early in the year. Importers who bought largely under the expectation of a very heavy consumption, and which was but partially realized both in France and England, may thank their stars that circumstances were against consignment shipments in autumn, otherwise prices would probably have given way sufficiently to have caused financial embarrassment to some of the younger importing firms in Britain that bought so largely.

THE *Northwestern Lumberman* says :—The Muskegon Car Works recently received from Kansas City an order for 350 freight cars, which is being filled as rapidly as possible. The company is considering an order from one company for 500 freight cars, and is negotiating to build street cars for several cities. If the Muskegon builders are not specially favored with orders, the car-building industry must be looking up,

Chips.

THE *Northwestern Lumberman* says that the snow is reported so deep in the Duluth district beyond the Northern Pacific junction that the skidding of logs has become difficult.

THE 1882 cut of pine in Michigan, Wisconsin and Minnesota will amount to about 10,000,000,000 feet, against 7,768,000,000 feet last year, and everybody wonders how long it can go on.

SINCE it has become possible to transport lumber cut in east Tennessee, the timber interests are developing rapidly. Many new mills have been built, and the supply seems almost inexhaustible.

THE shipments of forest products to foreign ports, from Puget Sound, as reported to the Port Townsend custom house for 1882, were as follows : Lumber, 59,064,000 feet ; lath and pickets, 3,869,000 ; shingles, 4,090,000.

ON the north branch of the Cedar, in Michigan, there is a log jam of four or five miles in extent. The Rust, Eaton & Co. dam was opened January 14, but the freeze-up was of a too positive character to make the move of immediate benefit.

THE pine land suit between A. J. Fair, of Detroit, and John Whyte, of Ridgetown, Ont., in the United States Court, has been settled, Mr. Whyte making a reduction of $15,750 on his claim. Fair loses about $7,000, but will resume business on a sound footing.

LEWIS SANDS, a prominent Michigan lumberman, has agreed to advance $200,000 to John Adams, of Winnipeg, for the purpose of working the latter's timber limit of 37½ square miles, near the Cypress Hills, N. W. T. It is intended to commence the erection of mills at once and push on developing the limit.

DURING the yellow-fever epidemic at Pensacola, Fla., millions of feet of timber accumulated in Covington county, Ala., and the country bordering on the Conecuh river, waiting the subsidence of the scourge to be floated down, and which is now going forward. These retarding operations will result in something of a boom.

ABOUT one-half of the stock expected to be got out on the Menominee river, Winnipeg, is now banked, estimated at 200,000,000 feet. There is about two and a half feet of light, dry snow in the woods. The weather is extremely cold, which makes hard hauling, but the operators are icing their logging roads wherever practicable, to obviate this. On the whole, the outlook is favorable for a larger crop of logs than was started in for.

THE Montreal *Gazette* says :—Mr. Senecal is reported to have purchased the lands of the Hall estate, which comprise some of the finest timber districts and agricultural tracts in the province, including the Gatineau mills and river frontage at Quebec suitable for elevators and wharhouses. The purchase, which is placed at the high figure of $2,000,000, has been made on behalf of a colonization company represented by Mr. Senecal.

THE Northern Pacific road is adapting the forestry idea to a somewhat new and practical end. It is planting trees as a defence against future snow-drifts. The company has had gangs of planters at work during the fall, and intends continuing the plan every season. Bonus is also offered settlers on the company's land grants to encourage the planting. A forest of well-grown trees will prove the most effective snow-shed possible, while it will cost less, last longer, and grow constantly in material value.

THE *Northwestern Lumberman* says :—The belief is general among manufacturers that the price of lumber the coming season will rule lower than in 1882, but with hardly an exception they are of the opinion that the consumption of lumber will be something to be talked about in after years. There are many indications that an immense amount of lumber will be sold the coming season, but there is liable to be some disappointment on the part of members of the wholesale trade in certain directions. There is a large quantity of lumber beyond the Mississippi river, and should the consumption in that territory be very large, the trade of the dealers who look to that section for customers will not bear the usual proportion to it.

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LIGHTNING CANT-DOG

STEEL RING,

The Lightest, Cheapest and Most Durable Cant-Dog in the World.

PETER ROBERTSON,

Chaudiere - - - Ottawa.

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MACHINE OILS, ETC.

McCOLL BROS. & Co.

TORONTO,

MANUFACTURERS and WHOLESALE DEALERS IN

Machine and Illuminating Oils

Four (4) Medals and Three (3) Diplomas awarded to them in 1881, by the Leading Exhibitions of the Dominion.

SEND FOR PRICES, ETC. 5L24

AMERICAN HEAVY

Oak Tanned Leather Belting

Rubber Belting, | Rubber Packing,
Rubber Hose, | Linen Hose,
And Cotton Hose.

A Full and Complete Stock always on hand.

Write for Prices and Discounts.

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WAREHOUSE—10 & 12 King Street East,

P.O. BOX 556. TORONTO. L5

Market Reports.

TORONTO.

From Our Own Correspondent.

FEB. 9.—There is little worthy of record in lumber matters to give you at present, and about the only paying business in the wood line just now is that of cordwood; owing to the severe wintry weather a thriving trade is being done by the coal and wood dealers, and lumber dealers are looking quite glum in consequence of their enforced idleness. There is scarcely anything coming in by rail, as all the railroads running into the lumbering districts are completely blocked with snow. Operations in the woods are also at a standstill in consequence of the great depth of snow, and perhaps it is just as well that the elements has done for the lumberman that which he was unwilling to do for himself, viz., curtailed the quantity originally intended to have been got out. The retailer will not have cause for complaint either, when the spring opens there will be a general rush and the building trade will resume more than its wonted activity. Some dealers have felt like trimming their sails in view of lower prices with the opening spring trade, but I for one feel positive that prices will hold up during the coming spring and summer months. Little anxiety may be felt on that score. Prices remain firm at last quotations:

QUOTATIONS, FROM YARDS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	20 50
" " " 32 ft	22 00
" " " 34 ft	24 00
" " " 36 ft	25 50
" " " 38 ft	27 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	16 00
1 " " dressed	23 00
1 " " undressed	17 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent.

FEB. 10.—Since the date of our last report we have had steady cold weather, and in some regions heavy snow storms have prevailed and fears are entertained that the snow will be so deep as to make hauling a matter of some difficulty. Business here has been very quiet, nothing reported beyond the usual retail demand, which has not been very active since the date of our last report, but this is usually the case at this season of the year. The prospects are good for the trade as soon as spring opens. We have no change to make in our quotations which are firm and steady as under, ex yard:—

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

The Grand Trunk Railway, having to a great extent given up burning wood, are now bringing in a large quantity of cordwood, so that stocks are likely to be more ample, and probably will have the effect of bringing down prices, and were it not for these supplies which are coming in from Richmond, Windsor and Acton, we would this week have had to report an advance in price; as it is some retail dealers are asking an advance for long wood. The retail trade has been very dull for the past two weeks. Wood in the country is plentiful if we have not too much snow to get it out of the bush. Prices remain steady as follows:—

Long Maple	$7 50
Short "	7 00
Long Birch	7 00
Short "	6 50
Long Beech	6 50
Short "	6 00
Long Tamarack	6 50
Short "	5 00

OTTAWA.

From Our own Correspondent.

FEB. 9.—A case is now before the court here which is of the greatest importance to lumbermen. Ever since the lumbering interest of the Ottawa Valley was first developed numerous mean individuals have plied the nefarious occupation of stealing and making use of saw logs along the banks of the main river and on the streams. The number misappropriated in this manner has been enormous. These parties who would be more familiarly named as pirates of the Upper Ottawa, have made so bold at times as even to erect small mills to cut up their ill-gotten timber. The lumbermen and limit owners have united of late years and gradually the grievance is abating. Many prosecution cases have come before the courts at different times, but strange to relate the convictions of the accused by juries have not been of great number. A man named Rowan who lives in Fitzroy township, appeared before the court here a few days ago, to answer the charge of feloniously stealing a number of saw logs. Indictments were taken out against him by five different lumbering firms, among them Messrs. Bronson & Weston, E. B. Eddy, Perley & Pattee. The defendant has been committed for trial and his trial will come off at the next assizes. The lumbermen are bound to prosecute to the last all such cases that are heard of in future.

Your correspondent had a conversation to-day with a lumbermen who has just returned from the woods. He said that the prospects for a very large output of lumber this season were excellent, and almost unprecedented. The different shanties in operation—larger in number than any previous season—were meeting with much success. As to the alarming reports of dangerous diseases being prevalent in certain localities he could say that there were no grounds for such reports. He entertained a rather gloomy outlook, however, for the future of this city as a centre for the manufacture of lumber, believing that the mill owners would in a few years be compelled to follow up the timber with their mills.

The British Canadian Lumbering Co., headquarters in Toronto, have purchased the extensive saw mill near this city known as Eddy's South Shore Mill. It formerly belonged to Senator Skead, but has been operated for the past five years by Mr. E. B. Eddy. The price paid was about $100,000.

Mr. J. Poupore, Crown Timber Agent at this city, has issued a statement of the revenue accrued in 1882 classified to revenue as now divided to Quebec, Ontario and the Dominion. It is as follows:—

	Quebec.	*Ontario.*	*Dominion.*
Saw Logs	$327,378.26	$189,769.54	None
Ground Rents	41,973.95	14,587.12	None
Booms	116,208.00	3,400.00	None
From Indian Land's Ground Rents			$ 6,100
Timber Dues			79,349
Slides and boom dues			83,000.44
Total, Quebec	$ 368,315.30		
Total, Ontario	2,042,380.76		
Total, Dominion	83,854.93		

Collections for A. J. Russell and John Poupore, by H. J. Chaloner, at Quebec, after adjustment at Ottawa. Quebec, $89,249,.41; Ontario, $65,778.21. Slide and boom dues on bonds taken at Ottawa—Dominion, $30,049.68. Grand total, Quebec, $457,564.71; Ontario, $270,158.87; Dominion, $114,004.61.

BOSTON.

Cotton Wool and Iron says:—Operations are of a very restricted character in almost every department. The season is unfavorable to outside business, and consumers are only ordering as a rule what they require for their present limited wants. At the latter part of February there is likely to be a moderate start-up in trade. At the sheds of the different railroad corporations there is a large stock of lumber on storage. Good grades seem to be held pretty steady, with calls slow and irregular. Furniture manufacturers are beginning to make inquiries for hardwoods, in anticipation of active operations, and prices for desirable grades seem to hold their own quite well. Pine is quiet but fairly steady. The prospect is that building operations will be pretty active the coming season if prices are favorable. There is quiet a demand for medium and low cost houses in the city and suburbs.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$57 00@64 00
Pine, fourths	57 00@59 00
Pine, selects	52 00@54 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 00
Lath, spruce, "	0 00@ 2 25
Lath, pine, "	0 00@ 2 50

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

CHICAGO.

The *Northwestern Lumberman* says:—Yard men are purchasing next to no lumber for the coming season's sales. The manufacturers on the east shore are still in possession of their stocks, with the prospect of having plenty of dry lumber on hand next June. The wholesale dealers of this city expect to see this lumber coming to the docks here in heavy volume after the opening of navigation, and are preparing to give it a regular white-bear pounding when it does come. The manufacturers themselves acknowledge that there is a prodigious stock of lumber in the country, and are openly predicting a lower range of market values next season. The markets of the interior are watching the attitude of the Chicago Exchange, and whenever a change is made in the list here, it will be quickly followed at other points. All over the Northwest lumber is selling at an average of about $1.50 below the various printed lists, with the exception of the one at Stevens Point, Wis., and possibly others at unimportant points.

The prospect of the abrogation of the lumber tariff has excited the manufacturers of Michigan and eastern Wisconsin districts to a considerable degree, and an effort to stir up and bring to bear an effectual opposition to the measure, has been made in the Saginaw valley and this city. The agitation of this question just now serves to intensify the uncertainty in regard to the near future of the lumber business.

The intensely cold wave, which for the past two weeks has demanded all the energies of the dwellers in the northern states in the effort to keep warm, has militated against the shipment of lumber to Chicago as well as elsewhere, the receipts of the past week being only about 50 per cent. of the amount received during the corresponding week of 1882, while the total receipts of the month show a falling off of 25 per cent. in lumber and 13 per cent. in shingles in the comparison between the two years. The larger part of the lumber received during the winter is of hardwoods and southern pine, although a small proportion is of special bills of white pine which have been sawed to order.

Receipts and stock on hand of lumber and shingles, etc., for the week ending Jan. 18, as reported by the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	*Shingles.*
1883	2,013,000	538,000
1882	4,891,000	1,262,000

FROM JANUARY 1, 1883, TO FEBRUARY 1, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1883	14,174,000	7,580,000
1882	19,755,000	6,910,000
Inc.		670,000
Dec.	5,581,000	

OSWEGO, N. Y.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 60@ 3 70
Lath	1 90@ 2 25

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

THE LIVERPOOL TRADE.

We take the following from the annual review of the *Timber Trades Journal*:—After reviewing the course of business in the timber trade for the past year, we can hardly avoid coming to the conclusion that it must be regarded as a disappointing one. The building trade has been in a most unsatisfactory condition, as the numerous failures of builders testify, and with the long credit given by the trade, even to the lowest class of consumers, some of the merchants have unfortunately figured in the lists of creditors with a frequency most disheartening. That this long credit system is not shortened is a fact that is admitted by every one, excepting perhaps the buyers; but it is certainly a state of matters to be greatly deplored that no joint action is taken by those most deeply interested to bring about some considerable curtailment of what is known as "Liverpool terms," *i.e.*, six months' credit. But such is the keenness of competition that, if such an arrangement were entered into, doubtless some one would be found to "keep the word of promise to the ear and break it to the hope," and the evil would again spring up in form as rank as ever.

Amongst the most striking features of the trade during the past year has been the extensive employment of steam tonnage in conveying not only cargoes of deals across the Atlantic, but pitch pine timber from the ports in the Gulf of Mexico, to which reference is made in more detail below under their separate heads.

Turning now to the details of the most important articles of our trade, we commence with

CANADIAN WOODS.—The importation of Quebec yellow pine, including both waney board and square timber, has been about 36,590 logs during the past year, against 30,594 logs in 1881, and 48,147 in 1880. There has been a very steady demand throughout the year, although prices have been high in comparison with previous seasons, and there is evidence that prices quite equal to, if not in excess of, these will have to be paid in future.

The stock on hand now is only 292,000 ft. of square and 275,000 ft. of waney, as against 348,000 ft. of square and 353,000 ft. of waney last year at this time, or a decrease of nearly 20 per cent., and as the cost of production is increasing year by year, owing to the high prices demanded for labour, the greater distance from which this timber has to be drawn to the rivers,

and other expenses in like proportion, we need not expect to see prices any lower, especially as the past season opened with freights at a very moderate rate.

The quantity of St. John, N. B., yellow pino imported, shows a slight increase over that of last year, but is below that of the previous one; but this favourito wood has now become so difficult to procure that it is confined to very few hands.

Red Pine Timber, which once formed a considerable item in the Canadian imports, has become a very insignificant factor, owing to the better sizes, cleaner growth, and above all the lower price at which pitch pine can now be had, in point of fact it bids fair to supersede it in most directions. The stock on hand has accumulated from 26,000 ft. last year to 65,000 ft. this year, whilst the consumption during December, 1882, amounted only to 3,000 ft.

Canadian Oak has been in fair demand during the year, notwithstanding the high cost of importation, and prices have not fluctuated greatly, the range being from about 2s. 11d. to 3s. 2d. per foot for prime qualities of ordinary average size. The consumption of this wood for waggon-building purposes is, however, becoming year by year interfered with by the growing favour in which scantling, cut to the exact sizes required, is now asserting itself. The stock on hand is about the same as that of last year, viz., 335,000 ft., against 347,000 ft. in 1881.

Birch has throughout the year maintained a high average price, and as there has been a steady and at times a strong demand for this wood, most of the importations have gone rapidly into consumption as soon as landed. The stock is very moderate, being only 102,000 cubic feet, and as advices from St. John, N.B., point to a continuance of high cost of production, there is every likelihood that we shall not see any fall in value for a long time to come.

Pine Deals show a decrease in the quantity imported during the two previous years, the quantities, including Quebec spruce and red pine, being in 1882, 1,128,480 pieces; in 1881, 1,268,513 pieces; and in 1880, 1,767,366 pieces; and, as the imports of Quebec spruce and red pine have been in excess of the usual quantity, the decrease in pine is in reality larger than it would appear from the figures above quoted. The stock on hand of Quebec deals includes, as do the figures of import, also all the Quebec spruce and red pine deals, and as these are estimated at about 1,000 standards, it brings down the actual stock of yellow pine deals to less than that of last year, when there was but a limited quantity of Quebec spruce and red pine deals on hand. The demand throughout the year has been fair, but the prices obtainable here have not left much margin for profit, and consumers of these goods have no causes to regret their purchases during the past season.

Spruce Deals.—The import for the past year has been 5,413,005 pieces, against 4,660,126 pieces in 1881, and 6,130,917 pieces in 1880, that is to say, it has been an average of the two previous years. We commenced the year with a moderate stock on hand of only 16,000 standards, about one-half the quantity held at the commencement of 1881, and although there was a fair demand, prices did not advance during the first three months of the year to a point satisfactory to shippers, and as might naturally have been expected looking at the exceedingly light stock held at the end of March, when it had dwindled down to only 10,400 standards. Any hope of a rise in the market was about that time shattered by the sudden engagement of large quantities of steam tonnage at very low rates of freight, which had been released from its ordinary employment by the stoppage of shipments of grain from the United States, owing to the action of a "ring" who tried to "corner" that market. We then saw the unusual sight of large steamers of 1,200 to 2,000 tons register discharging entire cargoes of spruce deals, and then even these were surpassed in size by the engagement of Messrs. Geo. Warren & Co's. steamers Kansas, of 3,455 tons, and Missouri, 3,331 tons register, each vessel carrying 1,400 to 1,500 standards of deals. Under the pressure to sell consequent upon this state of matters prices gave way until the beginning of July, when the grain market in the United States suddenly demanded its more than usual amount of tonnage, to carry off its accumulations, and this not only rid the timber trade of all its steam tonnage, but drew largely upon the better class of sailing vessels, and in consequence thereof freights went up with a bound of over 15s. per standard on previous rates, with the natural result that by the beginning of August our market displayed an amount of animation to which it had been a stranger, and a corresponding advance in prices soon manifested itself, so that St. John, N. B., deals sold in cargoes at £8 10s. per standard, or an advance from the lowest rates of about 25s. per standard. This state of matters did not, however, last long, as by tho commencement of the last quarter of the year prices began to decline under the increased importation, chiefly consisting of Lower Port goods, and, as this has been well kept up, the market has steadily weakened, until the rates at the close of the year are below what they were at the beginning, and we end with having a stock of spruce deals of all kinds estimated at about 22,000 standards, or about 25 per cent. more than we had at the end of 1881. The failures of two houses engaged largely in the importation of these goods, viz., Messrs. Peter Sutherland, jun., & Co., and Messrs. Carvill Brothers, have no doubt contributed greatly to this result, as both firms towards the termination of their business naturally pressed their goods on the market with great force.

Pitch Pine.—The importation has been very large, reaching the enormous quantity of 86,435 logs, compared with about 68,000 logs in 1881, and 59,000 logs in 1880. This is a startling increase, which should be duly weighed by the shippers of this wood in the United States, for it is quite evident that, large as are the resources of the Liverpool market, there is a limit even to its capacity for swallowing gigantic supplies such as those in question, and it might be said, without wandering far from literal accuracy, that cargoes have been sent into port without cessation for the whole of the past year.

With regard to North of Europe woods, the import of fir timber has been light, only 12,290 logs being landed, against 13,043 in 1881, and 33,757 logs in 1880. Trivial as this may appear, it has proved more than enough for the demand, as the stock on hand is now 59,000 ft., against 50,000 ft. last year. That such goods as Memel and Dantzig fir are rapidly losing the position they once held becomes every year more apparent, as neither in price nor in dimension can they compete with pitch pine, which is now being extensively used as a substitute. There is very little disposition to buy for spring shipment at the present f.o.b. prices asked by the Baltic houses.

Redwood Deals.—These have been imported in much larger quantities than in the previous year, and slightly in access of 1880, the figures being 772,886 pieces, 248,059 pieces, and 715,664 pieces respectively for the years 1882, 1881 and 1880, and a very large proportion of this increase has been in Finland goods, the low prices at which Uleaborg, Tornea, and similar have been sold proving a ssrong temptation to this market, where there is always a demand for cheap goods. The stock, however, of deals and boards together is about 47½ per cent. more than that of last year, when it consisted of 3,311 standards, whereas it now stands at 4,894 stds.

Norwegian Flooring has been unduly pressed upon an already well-supplied market, and prices, especially towards the end of the year, have given way. For cargoes of all white, with a large proportion of 3rds and narrows, shippers are now asking £8 10s. per standard, c.i.f. for 1st whito 6½ and 7×1, other qualities and dimensions with tho customary additions and reductions; but the price, moderate though it may appear, is not obtainable for f.o.w. shipments. This stock too is largely in access of last year, say 2,861 standards now, against 1,693 standards in 1881, or 60 per cent. additional.

American Black Walnut Wood has been imported very extensively, and although prime qualities have realized high prices, they have not always been satisfactory to the shippers, for not only is there a strong market for this wood in the United States, but the Continental markets, especially the German ports have, with few exceptional times, offered better inducements than this country.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

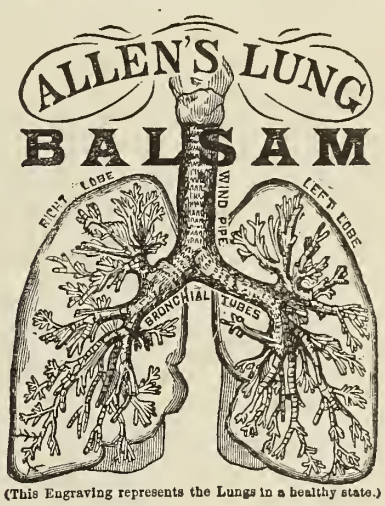
Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7



(This Engraving represents the Lungs in a healthy state.)

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HARMLESS TO THE MOST DELICATE.

In Consumptive Cases

It approaches so near a specific that "Ninety-five" per cent. are permanently cured where the directions are strictly complied with.
There is no chemical or other ingredients to harm the young or old.

As an Expectorant it has no equal.
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PERRY DAVIS'
VEGETABLE
PAIN KILLER.

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TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

PARRY SOUND.

The *North Star* says:—Extensive improvements are being made in the Parry Sound Lumber company's mills. In the water mill, the location of some of the gangs is being changed and fresh rock-bolting and strengthening is being done. The steam mill is being entirely rebuilt and refitted, and when completed will make one of the most convenient mills in Canada.

The Parry Sound River Improvement Company are applying for incorporation under the provisions of the Ontario Joint Stock Companies' Letters Patent Act. They propose to operate all rivers and streams between Moon River and Shawanaga River.

Snow is so deep in the woods now as to materially interfere with lumbering operations.

Smallpox in the Lumber Camps.

St. Paul, Minn., Feb. 8.—There is great excitement in the lumber camps in the upper Mississippi country on account of the spreading of smallpox. A committee has arrived from Aitken, to urge the importance of grappling with it at once. At Caldwell's camp, in Big Fork, there have been eleven cases and eight deaths. Three Indians caught the disease and carried it to Lake Winnebagoshiah, where the deaths already among the Indians number thirteen. It is almost certain that fatality accompanies the disease among the Indians. Cold Devil Camp is broken up. The lumbermen travelled 100 miles in the deep snow, the temperature below zero, being refused accommodation by the way. There are 2,000 lumbermen in the lumber regions in the upper Mississippi, and a stampede is feared which will spread the disease widely.

The Longest Bridge in the World

China possesses the longest bridge in the world It is at Langang, over an arm of the China Sea, and is 5 miles long, built entirely of stone, 70 feet high, with a roadway 70 feet wide, and has 300 arches. The parapet is a balustrade, and each of the pillars, which are 75 feet apart, supports a pedestal on which is placed a lion, 21 feet long, made of one block of marble.

Good Advice.—If our readers will accept proffered advice, they will always keep a bottle of Hagyard's Yellow Oil at hand for use in emergencies, such as Burns, Scalds, Wounds, Lameness, Croup, Chilblains, Rheumatism and all varieties of aches, pains and inflammations. It will ever be found reliable.

PLANTING FORESTS TREES.

At the annual meeting of this year or the Ontario Fruit Growers and Forestry Association:—"The best variety of forest trees to plant for ornament and for profit" was then considered. Mr. Gott spoke of the many beautiful varieties of trees which were proper for shade and ornament, among others being mentioned French spruce, white walnut, the different varieties of pine, basswood, Canada balsam, etc.

Mr. Reesor, while endorsing mainly the suggestions of the preceding speaker, dissented from him so far as the Canada balsam was concerned, as he considered it a most worthless tree.

Mr. Arnold spoke in favour of the magnolia, walnut, and Austrian pine.

Mr. Roy spoke of the beauty of the Austrian pine as an ornamental tree. He also recommended the cultivation of walnut trees both as ornaments and as a paying investment.

Mr. Smith recommended the growing of the poplar both as a shade tree and for its pecuniary value, as it was used very extensively in pulp mills for making paper.

Mr. Bucke stated that, independent of its beauty, the basswood had great economic value. In the Georgetown mills more than half the pulp used in the making of paper was produced from basswood, which was now worth from $4 to $5 per cord.

Mr. Wright stated that besides its beauty the basswood was very valuable as bee pasture, which was a very important consideration in a northern country, where they could not grow such a variety of flowers as in more southern sections.

Rev. Dr. Wild, being present, was requested to address the Association. He stated that he was deeply interested in trees, and had a very extensive collection himself in his orchard. He considered that the destruction of forest trees in Canada was a very serious evil, and had an injurious effect even so far as climate was concerned. He read everything relating to tree culture as carefully as he did matters relating to theology, and thought that man's moral and social condition was affected in no remote degree by his surroundings, among which none were more favourable for a development of taste for the beautiful than trees. The doctor, in conclusion, wished the Association success in their deliberations and gave them his hearty sympathy in their efforts to encourage the cultivation of ornamental and useful trees.

Mr. Dempsey thought that if the legislature enacted a law by which a fine of $10 would be imposed for defacing or destroying trees growing by the roadside it would prevent an obstacle to their growth much more serious even than the destructive attacks of cattle.

Mr. Drury, M. P. P., spoke of the Act recently passed by the legislature relating to the planting of trees by the roads. The effect of such growth of trees in enhancing the value of land and increasing the beauty of the country was ably remarked, and in conclusion the speaker expressed the opinion that within a year many municipalities all over the country would take action upon the bill, and encourage by all possible means the planting and cultivation of trees. If the meeting of the Association resulted in nothing else but in awakening a public interest in tree planting it would have accomplished much.

It was then moved by Henry Slight, seconded by W. Pemberton Page, "That the Fruit Growers' and Forestry Association protest strongly against the reckless way in which the telegraph companies unnecessarily destroy trees, in our street in towns and on the country roads; and that the Dominion Government be memorialized in relation to the matter.

FREE LUMBER.

The Port Huron *Times* says: "Senator Conger fought hard to prevent the senate from voting to put lumber on the free list, but did not succeed. To take off the tariff on lumber will be to raise the price of lumber in Canada and lower it but slightly here. The benefit will be almost entirely to the Canadians, and very little or none at all to consumers in the United States."

The above is most certainly a forced construction of the effect of the free lumber section of the tariff bill, at least so far as this country is concerned. While that clause, if finally adopted, might raise the price of lumber somewhat in Canada, yet the inevitable result would be to lower the price not only of lumber itself in this country, but also of labor, to correspond with that of Canada. It is fraught with the most serious results to about one million men, who are dependent upon the lumber industry for support for themselves and families. It is certainly unjust to the American manufacturer to admit Canadian lumber free into the United States while the Canadian government retains a tax on lumber imported into Winnipeg and other portions of the Dominion where there is at present a demand for the same. It is virtually passing over the control of the lumber market in the east to the Canadian producer. It also enables them to lay heavy hands on the western market, because they are enabled to exclude the American product from the places alluded to by a tax, while their own lumber may be sent there free from any such obstruction.—*Lumberman's Gazette.*

HOW CLOTHES-PINS ARE MADE.

A writer thus describes a clothes-pin factory: The process of making the pins is a very interesting one. The wood used is mainly white birch and beech. The logs are cut and hauled to the shores of the lake or streams emptying into it, whence they are floated down to the mill. As fast as required they are hauled into the mill by a windlass and chain, worked by steam power, and sawed into lengths of sixteen or twenty-two inches, the former to be made into pins, and the latter into boards for the boxes required in packing. The sixteen inch lengths are next sawed into boards of the required thickness by a single machine, then into strips of the proper size by a gang of twelve circular saws, and finally into five-inch lengths by a gang of three saws. The logs have now been cut up into blocks about five inches long and three-fourths of an inch square. Falling as they leave the saws on to an elevator belt, they are carried into an upper story, and, returning to the first floor, are deposited in troughs, whence they are fed to the turning lathes, of which there are several, each being capable of turning eighty pins per minute. They are then passed to the slotting machines, in which a peculiar arrangement of knives inserted in a circular saw gives the slot the proper flange, after which they are automatically carried by elevator belts to the drying bins on the second floor, where they are subjected to a higher temperature, generated by steam pipes, until thoroughly seasoned. There are several of these bins, the largest of which has a capacity of 100 boxes (72,000 pins) and the smaller ones fifty.

The pins are now ready for polishing and packing. The polishing is accomplished by means of perforated cylinders or drums, each capable of holding forty bushels, in which the pins are placed and kept constantly revolving until they become as smooth as if polished by hand with the finest sandpaper. A few minutes before this process is completed a small amount of tallow is thrown in the drums with the pins, after which a few more revolutions gives them a beautiful glossy appearance. The polishing drums are suspended directly over the packing counter on the first floor of the mill, and being thus immediately beneath the ceiling of the floor above, are readily filled through scuttles from the drying bins on the second floor, and as easily emptied upon the counter below, where they are sorted into first and second grades and packed in boxes of five gross each. The sorting and packing are done by girls; 250 boxes are packed per day.

The London *Timber Trades Journal* says:—Complaints have reached us of the lengths of several cargoes of deal ends running some inches short. It is most important that shippers abroad should carefully attend to the cutting of the ends to their proper and specified lengths, as not only is the loss of wood a serious matter, occurring as it does in ends so frequently, but the loss of labor in selecting out and laying aside the short lengths seriously adds to the cost of using them.

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Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

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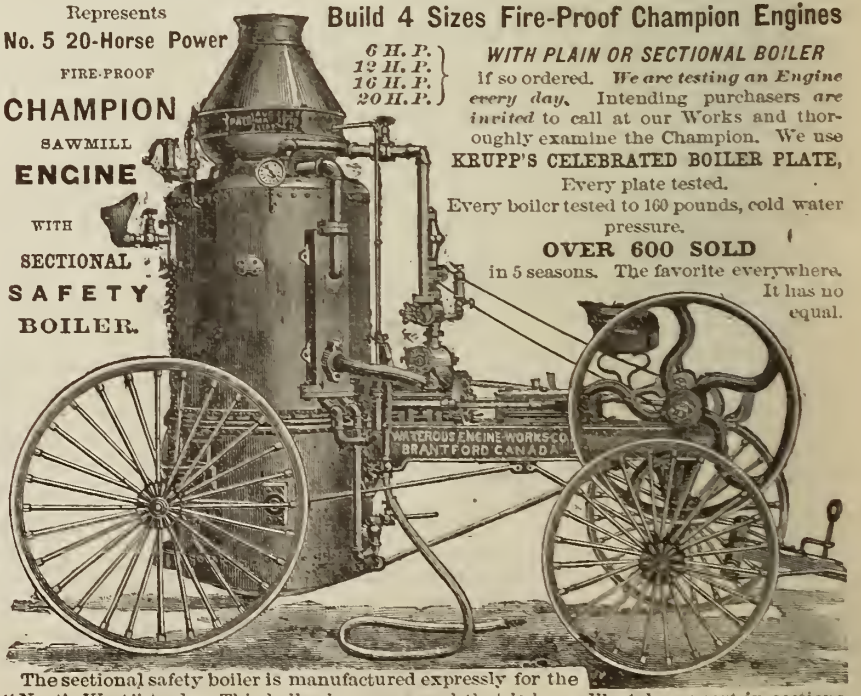

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FREE LUMBER AND FOREST PRESERVATION.

There has been abroad in the land for a few years a number of people who have gone daft with the idea that the forests of America are being denuded at a tremendous rate and that if something is not instantly done the continent will speedily become a sahara of desolation. The idea popped up in the senate the other day as an argument in favour of placing lumber on the free list. The thought of the statesman that introduced it seemed to be that it would be altogether generous and politic for the United States to admit Canada lumber free, and encourage the people of the Dominion to destroy their country by stripping it of its forests. It never seemed to have occurred to the Deleware Senator that it was quite as important to preserve the Canadian forests as the forests of the United States, the former exerting rather more influence upon the climate of the continent than the latter. Ingalls, of Kansas, a state whose forests were destroyed centuries ago, or never existed, but which seems to be progressing pretty well without them, caught on to Bayard's notion that "there was a striking inconsistency in keeping upon the statute book a law offering a bonus for the cultivation of timber and at the time keeping out foreign lumber by a duty." He thought it plethoric of wisdom, but it is rather a catch-penny notion, after all. Preserving the pine forests of Michigan, Wisconsin and Minnesota would not clothe the prairie states with the shelter of trees needed to make them more acceptable and delightsome as places of residence. Removing the duty on lumber would not justify the stoppage of forest culture. Michigan is not suffering from the destruction of her forests. If other states are, let them pay a bounty for tree planting, if it will pay. The duty on lumber is justified by the duties on iron, steel, woollen goods, sugar, tea, coffee, etc., and the general policy of protection, and it should stand or fall with them. Whether at some future time there will or will not be a dearth of pine in the United States cannot affect the question. The development of Michigan will not be stayed by any consideration of that kind. Billions of feet of the best timber that ever grew has been reduced to smoke and ashes in the progress of clearing Michigan and other States, and the operation will go forward until the utmost extent that can be reduced to cultivation has been reached. The pine and other woods of Michigan will not be preserved by rendering their conversion into merchantable shape unprofitable. When the axe of the lumberman can no longer be lifted up against them at a profit, the axe of the settler will fell them and the clearing fires sweep them away. Should the competition of the Canadian lumbermen become so sharp that as to induce the curtailing of operations in the Michigan lumber woods, there would be but little saving of timber for the future. Let some of the eloquent advocates of forest preservation go through the woods and view the havoc made by the fires of 1871, and they will be less urgent on the subject. The destruction of the Huron peninsula in 1882 is another illustration of what a fire in a forest can accomplish. The pine forests of Michigan are more and more subject to such visitations, and before such encroachments and the axes of the settlers they are sure to go down, whether lumbered or not. Indeed, if abandoned by the lumbermen they would the sooner disappear. The hardy settlers are among them engaged in pushing the wheat line northward. They will not cease their efforts on account of arguments advanced by the advocates of forest preservation, until Northern Michigan is covered with cultivated farms. If there is any argument in favor of protective duties upon anything whatever, it applies equally to lumber. Forest cultivation is another matter, in no way complicated with the duty on lumber.—*Lumberman's Gazette.*

TIMBER CONTRACTS ON WALPOLE.

The Wallaceburg *Valley Record* says :—"The Indians on Walpole Island are greatly excited over the sale of the balance of their standing timber. Mr. Tennant, of Malorytown, some time ago contracted for the white oak timber measuring less than 16 inches at the butt, and has removed nearly all, his time being almost up. In December he offered $7,000 for the larger timber, but as Mr. Hiram Little and others offered more, his offer was raised to $10,000. On Tuesday last the Indians were assembled to vote on this offer, Mr. Watson, of Sarnia, the Indian agent, being present. Meantime, however, Mr. Little increased his offer to $14,500 and a new dock and warehouse, and he further agreed to pay for the tops of the trees, when cut, at a rate which he claims would give the Indians a further sum of over $5,000 for work and timber. The offer of Mr. Tennant was that the small timber that he has not yet removed should be allowed to revert to the Indians, in addition to the $10,000 paid in cash, but it is claimed by Mr. Little and many of the Indians that the small timber referred to is worth less than $500, and if not removed at once by Mr. Tennant it will revert to the Indians. On the other hand it is claimed that no legal tender was made by Mr. Little, though 100 printed copies of his offer were circulated on the Island and placed in the hands of the Indian agent before the voting on Tuesday, on which day a majority of 14 voters approved of Mr. Tennant's offer, the vote being 67 for and 53 against. Mr. Little now claims that a large majority of the Indians were opposed to the bargain, but that they were bribed, and yesterday he secured the affidavits of about sixty Indians to prove this and is now adding very largely to the number. He has also engaged counsel and telegraphed for Indian Superintendent Dingman, of Strathroy, who will be here in a few days to investigate the matter. It is claimed by Mr. Tennant's agent that no bribery was practiced until Tuesday morning, and that then it was not resorted to until it was found necessary to checkmate the actions of their opponents. He further states that affidavits are already in the hands of Indian Agent Watson, proving bribery on the part of those opposed to the offer of Mr. Tennant being accepted by the Indians. Mr. Little's tender was never voted on, the Council on Tuesday being called to accept or reject the offer of Mr. Tennant. We give this week only a brief outline of the situation without comment, but as the matter in question is an important one it will receive attention in future issues of the *Record.*

FOREST DESTRUCTION IN THE STATES.

The *Mail* says :—The following article from the New York *Bulletin* calls the attention to some facts of very considerable interest to our cousins across the line ; and if it be the fact that the situation of lumber in Canada is not very much better than it is there, the article is of little loss interest to us than to them :—

In a recent article on the lumber industry of the United States in 1880, as reported by the Census Bureau, attention was called to the rapid destruction of American forests now in progress—so rapid indeed that it appears to be a question of but a few years when, at the present rate of cutting, the domestic supply of merchantable timber will be quite exhausted. We have now another bulletin from Mr. Sargent, the special agent in charge of the forestry section of the census, which sets forth in even a more striking light the extent of the slaughter of the small timber of the country for fuel.

The total value of the products of the lumber industry in 1880 was $233,367,720, more than half of which represented the destruction of white pine—a rate that it is calculated would practically use up the supply within eight years from the census year. The other portion of the total products represents, presumably, a less rate of cutting in proportion to supply, but yet sufficient to indicate a lease of life not much greater than in the case of white pine alone. And then, too, when the pine is gone the saws will be put into the other timber.

But the lumber industry by no means brings forward the whole, or even the larger part, of the forest destruction that is going on. The total value of cordwood consumed in the United States for fuel in 1880 amounted to $312,962,373, and that to at an average valuation of less than $2.25 per cord. Taking this into consideration, and the fact that cordwood is a lower grade of wood than lumber, it will be readily appreciated that the total value of the consumption for fuel represents a much greater destruction of trees than does the lumber industry ; certainly twice, perhaps three times as much.

The map accompanying the bulletin indicates a very small area of the country in which the use of coal for fuel predominates. The area is not a continuous one, but is represented by spots, some of a considerable size, contiguous to the large cities lying about the 41st parallel of latitude and extending all the way from Massachusetts to Nebraska. These areas are separated into two groups, eastern and western, by the intervening wood consuming region of Indiana and Western Ohio. Following this line and enclosing these areas is a wider belt in which wood only is used for fuel to any extent. Grouping the returns by states into sections, we have the distribution of fire wood consumption in 1880 as follows :—

	Cords.	*Value.*
New England	3,780,878	$ 14,934,629
Middle States	20,625,790	57,376,183
Southern States	67,296,340	112,188,505
Western States	43,352,207	96,837,368
Far Western and Pacific States	5,482,224	25,513,055
Total domestic use	140,537,439	$306,950,040
Total, other consumption.	5,240,698	15,012,333
Total consumption	145,778,137	$321,962,373

This total is further increased by an item of $5,276,736 for wood put into charcoal. No estimate is given of the amount of standing fire wood, and it is, therefore, not possible to say at what rate the consumption is encroaching upon the supply and annual growth. But everyone knows that in most of the Eastern and Middle States this source of fuel has been practically exhausted ; far enough, at any rate, to make wood dearer than coal. The area of complete destruction constantly widens with the area of dense population. It is evident, therefore, that in the course of another generation or two the forests of the whole country will be in the condition they are now in at the East. It is beginning to be considered certain that these changes are having a material effect upon our climate and upon our crops.

It is this phase of forest destruction that appeals to the thoughtful agriculturalist in behalf of tree culture. For the purposes of fuel and many minor uses, it is quite practical to plant trees and get satisfactory profits in comparatively few years. Many kinds of trees grow rapidly. Even some of the hardwoods do—as walnut, cherry, &c. The long-leafed pine is a very rapid grower. The late Governor Ross, of Delaware, one of the most prominent and successful agriculturalists of that State, seeded a portion of his fair acres in long-leafed pine when in middle life. It was not done broadcast, but in rows some thirty feet apart. The result was a source of continuous pride and satisfaction to himself and to the community. He lived to see a beautiful little forest of stately pines. Trees planted in this way admit of other crops between the rows for many seasons, and wood can be taken in a few years by thinning out in the rows as the growth requires. And it need hardly be added that the study of trees, and their adaptation to climate, soils, &c., is in itself a pleasant and wholesome recreation.

POLISHING WOODS.

A correspondent of the *Scientific American* asks : 1. For the best way to polish fancy woods ? A. Soft woods may be turned so smooth as to require no other polishing than that produced by holding it against a few fine turnings or shavings of the same wood while revolving. Mahogany, walnut, and some other woods may be polished by the use of a mixture as follows : Dissolve by heat so much beeswax in spirits of turpentine that the mixture, when cold, shall be about the thickness of honey. This may be applied to furniture or to work running in the lathe by means of a piece of clean cloth, and as much as possible should be rubbed off by using a clean flannel or other cloth. Hard woods may be readily turned very smooth ; fine glass paper will suffice to give them a very perfect surface ; a little linseed oil may then be rubbed on, and a portion of the turnings of the wood to be polished may then be held against the article, while it turns rapidly around, which will in general give it a fine gloss. You may also try alcoholic shellac varnish, 2 parts ; boiled linseed oil, 1 part : shake well before using. Apply a small quantity with a cloth, and rub vigorously until the polish is secured. 2. To make paper-hanger's paste ? A. First heat water to boiling, then add flour with constant stirring. To prevent the formation of lumps the flour may be passed through a sieve, so as to insure its most equable distribution ; agitation is continued until the heat has rendered the mass of the desired consistency, and, after a few moments further boiling, it is ready for use. In order to increase its strength, powdered resin in the proportion of one-sixth to one-fourth of the weight of the flour is added. To prevent its souring, oil of cloves, or few drops of carbolic acid is added.

A STRANGE COMMUNICATION

We have received in an envelope bearing the postmark "Dublin," and the name of the Shelbourne Hotel, Dublin, surmounted by a Viscount's coronet, the following production, It is satisfactory to learn that we are safe on this side of the Atlantic, and that we owe this additional benefit to our great agricultural and lumbering industries :—

THE END OF THE WORLD.

TO THE INHABITANTS OF PLANET EARTH.

When Fires refuse to burn
Our God doth then appear,
Continents He will turn
Into a Hell this year.

The winds will cease to blow,
There will be Drouth and Heat ;
Corn for Food will not grow,
Nor will Oats, Pease, or Wheat.

British Isles 'scape alone
An Angry Iron Rod,
On them descend the throne
Of King Jehovah-God.

Sinners who will repent
Can now obtain the keys,
Which save from punishment,
Found only on their knees.

For the purpose of obtaining a large supply of Grain, Timber, and Lumber for the British Islands, Canada and the United States will be exempted from calamities this year. J. G. SWORD.

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EMERY WHEELS FOR SAW GUMMING.

EX INUTILI UTILITAS
TRADE TANITE MARK

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CONSUMERS IN CANADA,

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To take our sole Agency for the Provinces of ONTARIO and QUEBEC. By this means consumers who want only single wheels, or goods in small quantity, can supply themselves easily and avoid the trouble of special importations, while dealers can secure the most liberal terms, fully equal to those they could obtain by buying of us direct.

Messrs. Frothingham & Workman will carry a full stock of TANITE EMERY WHEELS, and a sample line of Machines, and can fill all orders promptly.

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September 28th, 1882. 1yL13

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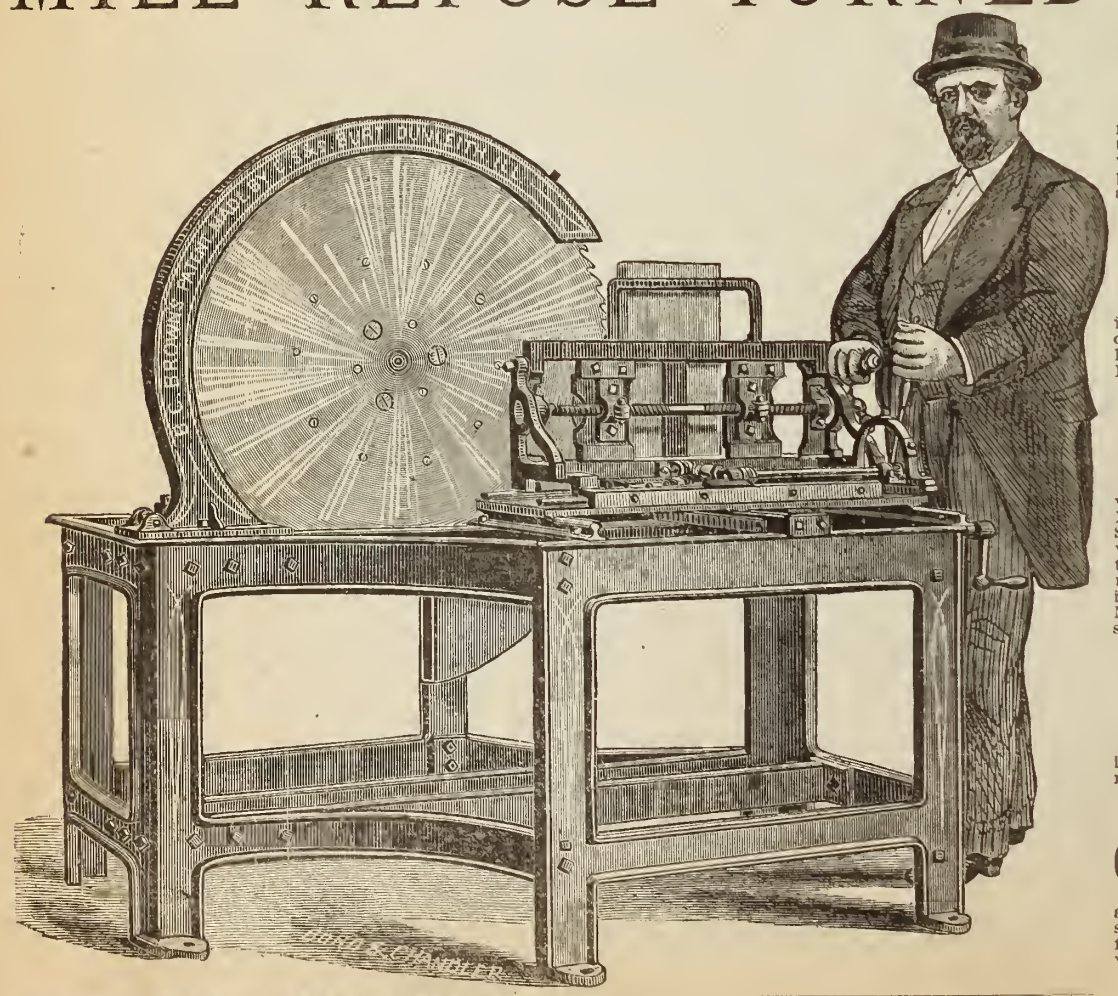

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Our Steam Feed for Circular Mills,

is now the Best Feed where Steam is the motive power. It is easily operated, is simple, rapid, and seems never likely to wear out; sixteen 16 ft. boards, or eighteen 12 ft. boards, have been cut by it in one minute. It is the established feed for steam mills; I make a specialty of its manufacture; will guarantee satisfaction.

Our Patent Twin or Span Circular,

with Steam Feed for Steam Mills, and Rope or Rack Feed for Water Mills is fast coming into general estimation and is used in place of Gang Slabber in our best Canadian Mills. One of our Span Circulars which will slab logs 25 inches in diameter down to 7 and 8 inch stocks, will do the work of three slabbers, with an immense reduction in first cost, running expenses and labour. Two of these machines can be seen at work in Messrs. Gilmour & Co's Mill, Trenton, and Georgian Bay Lumber Co's Mill, Waubaushene and Port Severn. ☞ I am also introducing a new style of Mill Engine, neat, substantial and simple, with Corliss Frame and Balanced Valve, all carefully designed and honestly made.

Covel's Automatic Saw Sharpener,

is now well-known and highly appreciated, when placed at work in the mill it sings out its own praise; I keep it constantly on hand, ready for immediate shipment.

Our Standard Circular & Gang Mills & Machinery,

are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a specialty, any party wanting a First-class Mill will find it to their advantage to give me a call

WILLIAM HAMILTON, Peterborough Foundry and Machine Works, PETERBOROUGH Ont.

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VOL. 3. PETERBOROUGH, ONT., MARCH 1, 1883. NO. 5.

FOREST GROWTH ON COAL FORMATION OF NEW BRUNSWICK.

(BY EDWARD JACK.)

Dr. Bell in the report of the progress of the geological survey of Canada, for 1879-80, states that hemlock "is scarce near the eastern sea coast of New Brunswick." The doctor is mistaken; some of the very best hemlock lands in New Brunswick are to be found on the east side of the Intercolonial, between Newcastle station and the crossing at the Richibucto river, indeed, so far from being scarce, hemlock is very abundant on both sides of this railway in the location above mentioned.

The eastern sea coast of New Brunswick is largely embraced within the bounds of the carboniferous rocks, and where these occur in that Province hemlock is usually in great abundance; where it is usually of large size with rough and coarse bark, the wood being commonly shaky and of infirm quality; on the immediate sea coast hemlock is not usually found, the growth there being most always white birch and poplar or stunted spruce. The rocks of the coal formation underlie about a third part of New Brunswick; the country where they occur is usually level, ridges where they occur being generally low and of gradual elevation. On the heads of the streams there are extensive heaths and bogs, some of these have evidently been at one time lakes over which vegetation has spread and which has acquired such consistency as to allow persons to walk over it. This is especially noticeable on the head of the Canaan river where there are ponds of great depth in the middle of the barrens, the water in these being bright and pure. The original growth upon the coal formation consisted largely of spruce, pine, hemlock and Tamarac, hardwoods being less abundant and of inferior quality. As the carboniferous formation was largely in the track of the Saxby gale, the timber which once stood upon it has been for the greater part blown down and burnt, but a young growth, especially of white pine, is springing up in many places, which if protected will be of very great value.

Large quantities of second growth white birch are also making their appearance, and, as this is a wood of quick growth, it will not be many years before it will be of value. Very much of the soil on the coal measures is nearly worthless for agricutural purposes, but very well adapted to the growth of the white and red pine. The streams by which the carboniferous area are intersected are free from stone and easily driven, in many cases logs could be rafted immediately to the sea from the place where they have been cut, so that we have here just the country for the purpose of experimenting in forest cultivation. About the only thing to dread is fire, to which the plains of this district are much subject. Not only could pine and birch be grown to advantage, but also tamarack, which is a wood of rapid growth springing up around swamps and places where the ground is low and damp.

PROTECTION WHICH DOESN'T PROTECT.

WILLIAMSTOWN, January 27, 1883.—The following letter has been published:—Our revenue for the present fiscal year is estimated at $400,000,000, a sum altogether beyond onr needs in a time of peace, an unreasonable burden upon the people, and a temptation to extravagance and recklessness in expenditure on the part of the government. The people are asking for a diminution of this excessive revenue by the lessening or the removal of some of the taxes imposed upon them directly or indirectly, and by means of which the revenue is secured. And now that Congress is considering how to re-adjust the burdens of taxation, what duties or taxes may be lessened or remitted altogether, we venture to suggest that one important article which should go upon the free list is lumber. If there is one thing in which all are interested, from the boy who wants a stick suitable for the exercise of his propensity to whittle to the man who wishes to build a house or a factory, it is lumber, and especially that which is the product of our white pine trees, the noblest trees of the forest. So valuable is this lumber, because it is adapted to so many uses, and so great is the consequent demand for it that the domestic sources of supply are being rapidly exhausted. Formerly we derived large quantities of pine lumber from Maine, from the banks of the Kennebeck and Penobscot. Now our chief source of supply is the region comprising the states of Michigan, Wisconsin and Minnesota. And so rapidly are we stripping this region that it is estimated in the returns of the recent census, that the supply from this source will be exhausted in less than ten years. As a consequence the price of pine timber land and of lumber is rapidly advancing, enriching a few land-holders and lumber dealers at the expense of the public at large. Meantime Canada stretches along our northern border a broad belt of pine timber which she is ready to send to our markets, but which we seek to exclude by imposing upon its introduction a duty of two dollars for every thousand feet. The protection which this duty affords to our forests is, to use the words of another applied to a different subject, "such protection as wolves give to lambs, covering and devouring them." The duty amounts to a premium offered for the destruction of our forests. Our lumbermen are stimulated by the additional price of two dollars a thousand feet, which this duty enables them to charge, to cut off our forests as rapidly as possible and hurry them to market, and the people of Canada instead of cutting their lumber and giving us the benefit of it, are coming over the borders as an army with axes to hasten the destruction of our forests. It was recently stated before the committee on the revision of the tariff that as many as ten thousand Canadian wood-choppers come into the Michigan pineries in the winter and find ready employment in cutting lumber, at wages raging from two dollars to two dollars and a half per day. Thus our precious pine forests are not only exterminated the more rapidly and the cost of lumber to all of us enhanced, but we are putting into the pockets of our Canadian neighbors $25,000 a day for the aid which they give us in destroying one of our most valuable possessions. For it is to be remembered that every pine into which the lumberman strikes his axe represents the growth of a century, and that those pine forests of Michigan and Minnesota are not to be reproduced in a hundred years if at all. It will be a great loss when those northwestern pineries are no more. We have other forests indeed. We have other pine forests; but none of the quality of these. It is very desirable to prolong their existence as much a possible, and if, in any reasonable and practicable way we can lessen the demand upon them so that instead of being swept utterly away a remnant may be spared, and so treated that successive growths may be secured upon the same ground, nothing more advantageous for the country in all respects could be wished for.

May we not well, therefore, relinquish all duties upon pine lumber, and welcome freely all that Canada or any other country is ready to give? We need to protect our precious forests. The lumbermen will protect themselves. They have done so already. A prominent organ of theirs, published in the northwest, proclaims that the ownership of a pine forest and a saw mill is better than that of a mine of gold or silver. The mass of the people want cheap lumber and the interests of the few lumbermen ought not to prevent their having it.

N. H. EGGLESTON.

PINE STILL GROWING.

The *Huron County News*, of Michigan, said in a recent issue:—

It is a matter of surprise to see how large a number of saw logs continue to be taken from tracts of land supposed to be thoroughly lumbered years ago, as well as from the windfalls over which the fires have swept. From such sources the custom mills—of which every township has one or more—are again this winter being fully stocked, some having already all they can saw during the coming season.

Such a state of things is by no means new. Many tracts of pine lands are denuded time and time again. A few years ago a firm of extensive operators on the upper Mississippi gave out that all the pine was cut on lands which they owned on a tributary, and their forces were sent elsewhere. Two or three years ago, however, the same operators established their camps on this same denuded land again, and went right on logging, as if nothing had ever happened. Incidentally, it may be mentioned that one of the members of this firm helped to make the census figures which so innocently assure the people that there are but 6,000,000,000 feet of standing pine in the state of Minnesota. Possibly there are people of an inquiring turn of mind who will ask, if this man knew so little about the pine standing on his own land, how did it come about that he knew enough about the pine all over the state to be considered an authority? but, of course, the census figure-makers would at once raise the point that the question is irrelevant.—*Northwestern Lumberman.*

SOLID PIANO CASES.

The piano manufacturers of this city are discarding, in a great degree, rosewood veneered cases, and making ebonized cherry cases instead. The name of rosewood, when pronounced, is a very pleasing wood to some, but that does not prevent the wood, when laid on a piano case from splitting and blistering, which it almost invariably does, sooner or later. A rosewood case, a few years old, that looks decently, is difficult to find. The manufacturer is often cursed for it, but he is not to blame. It is the nature of the wood. A Chicago manufacturer had a large number lot of cherry sawed by Muskegon, Mich., parties, and will use it in many of the instruments turned out by him. There is no reason why a sold cherry case should not hold its good appearance until the piano is worn out. A certain class of purchasers—and much the larger class—have some regard for durability as well as style, and these are learning to let a rosewood veneered piano alone. Should the use of cherry become very general in this industry, it will open up a demand for it that has not heretofore existed.—*Northwestern Lumberman.*

MIDLAND.

The *Free Press* says:—While taking a stroll around our little village, I observed a structure being placed on the mill deck at Dollar's mill. On enquiry from our Mr. Fraser what it meant he gave me the very pleasant information that Mr. G. A. Greer, a Moutreal lumber merchant, has purchased the entire stock, (with the exception of the mill culls, which were sold previously to Mr. Kennedy, of Toronto,) with the intention of shipping it to the Northwest in the spring. Mr. Priest, Mr. Greer's agent, is placing three planing mills on the mill deck, and a rip-saw to be driven by the engiue belonging to the mill, to prepare the lumber for immediate use when it reaches its destination. We wish Mr. Priest success in his uudertaking. It is a new thing iu these parts and it is already doing good, as many of our noble lumbermen will get employment instead of walking around with faces on them as if they were going to their father's funeral.

MANITOBA LUMBERING.

The Emerson *International* of Feb. 17, says: R. J. Short, Esq., a prominent and well-known tie and timber contractor, was an agreeable caller at the *International* office to-day, and during his call, gave a reporter information in regard to his lumbering operations on the Lake of the Woods that may not be without interest to the general public.

Mr. Short has a contract for getting out 15,000,000 feet of logs and 150,000 railway ties, the latter for the C. P. R. Co. He gets his supply of timber from his timber limits on the Lake of Woods, and has eight camps. He employs 215 men and about 50 teams. Wages are as follows: choppers, $30 per month and board; hewers, $50 per month and board; teams and teamsters, $2.75 per day and found. Mr. Short was too modest of course to say anything about the excellent board he provides his men, but we know from expressions of Emersonians who have worked in his camps that he provides first-class fare for his men. The rations include fresh fish, fresh and salt beef, fresh and salt pork, tea and coffee, fresh bread, etc. Mr. Short states that that he has about thirty-five men from Emerson at work in his camps, and quite a number of teams from this point. The object of his visit to Emerson this time was to purchase and hire a number of teams. He purchased two fine teams from Mr. Wm. Coutts, and will engage a sufficient number of horses to make up a carload. Mr. Short furnishes free transportation for men and teams to the camps. He has already shipped three carloads of horses from this point.

Mr. Short states that the eastern portion of Manitoba, or the "disputed territory" is far more valuable for its minerals and its timber than most people imagine. As an instance of the supply, Mr. Short relates that from eight acres his men cut 9,100 logs and 27,000 ties. The pine is of the red and white variety. The trees are straight, and frequently 114 feet high, while some four feet in diameter have been cut.

Mr. Short is erecting a large saw mill at Rat Portage, which promises to become the Minneapolis of the Canadian Northwest. He also has very ingenuous machinery at Rat Portage, operated by steam, to facilitate the loading of ties on flat cars for shipment. Those members of the Press Excursion party that visited the Lake of the Woods last summer will remember with what interest the party watched the working of the contrivance which loads a car in incredibly short time.

THE U. S. TARIFF.

In the debate in Congress on the Lumber Tariff, Mr. Horr of Michigan, said: "Last year the State of Michigan alone manufactured 3,850,000,000 feet of pine lumber. The product of the forests in Michigan last year, including laths, shingles, staves, etc., amounted to the enormous sum of $60,000,000. The lumber product of the United States as a whole was worth the sum of $230,000,000. The value of the mills and lumber plants in Michigan alone is over $40,000,000; in the entire United States $180,000,000. The mills in Michigan employ 21,000 men at an average of $2 per day, and the camps employ 35,000 men at an average of $1.75 per day. It will thus be seen that in Michigan there is being paid out to laborers in this industry, over $100,000 per day. Last year Michigan paid on its lumber industries $17,500,000 for labour alone. The United States paid over $80,000,000. There were at work in the United States in the lumber mills 90,000 men, and in the lumber camps 130,000 men. The lumber interests of the United States last year bought and consumed $30,000,000 worth of products of the farm for food for man and beast. Last year Michigan, Minnesota and Wisconsin produced 7,500,000,000 feet of lumber. In the northwest were produced last year over 4,000,000,000 shingles. There is left in the United States to-day a large amount of standing pine. On the lower peninsula of Michigan there are 7,000,000,000 feet. There are of standing pine in Michigan, Minnesota and Wisconsin 81,000,000,000 feet; in the Southern States the enormous amount of 230,000,000,000 feet; in Canada there are only about 75,000,000,000 feet of standing pine. That imported each year into this country is less than 400,000,000 feet, the revenue from which amounts to about $1,000,000." Mr. Horr said he had given these facts to show the enormous magnitude of this interest. "The question now is why should there be a duty upon this article. The commission recommended keeping the duty on lumber where it is. The stumpage on lumber in Michigan averages about $4 per thousand. The bulk of lands in Michigan and Wisconsin were granted by the government to different corporations. In Michigan large grants were given to the canal company and four or five railroads running through the pineries. Very little, if any, of the pine of Michigan now left in the hands of mill men was purchased at Government price. The lands from which the manufacturers get their supplies have to be bought at advance rates. The taxes in Michigan are ten times as large as they are in Canada. Wages are 30 per cent higher. The price of articles is higher in the United States than in Canada. All farm products are higher, horses are higher."

In regard to the question of preserving the forests in Michigan, Mr. Horr said they were compelled to lumber their lands or lose them altogether. "All through that state settlers are building up farms. Railroads have been run in every direction. This causes large fires. When the timber is burned it has to be lumbered within one year or it becomes worthless. A worm or grub attacks the tree as soon as it commences to die. The question is not so much how to preserve the forests as how to preserve the timber when the forests are burned. With the tariff on lumber which protects against the coarse lumber of Canada, they can lumber their lands much more closely than when lumber is low. It was stated that lumber was high, but, asked Mr. Horr, "is it true that a country is most prosperous when the prices of everything is low?" He held the contrary to be true. Mr. Horr said it had been his aim to stand by from the start all the industries of the country. He had tried to rise above the mere local advantages. They had been living twenty-two years under the present tariff system and no other nation could show such general advancement. No class of men were more prosperous than the tillers of the soil. They find a ready market and a good price for all they can raise, and they fully understand that this state of things exists on account of the enormous industries that have grown up and become prosperous under the present tariff system.

DISTRICT OF NIPISSING.

TOWNSHIP OF FIELD.

The following is taken from the official report:

ST. MARY'S, ONTARIO.
December 31st, 1881.

SIR,—I have the honor to inform you that I have completed the survey of the township of Field, under instructions from your department, dated May 18th, 1881; and have to report thereon as follows:

Leaving Toronto on the 15th of June, I proceeded to the township, via Rosseau and Nipissing, crossing Lake Nipissing by the steamer Inter-ocean to Sturgeon Falls. I then proceeded by canoes up Sturgeon River to the northeast angle of the township of Springer, and having obtained on the 21st of June an observation of Polaris on east elongation commenced my survey by running the east boundary of Field on a course astronomically north, making the concessions one mile in depth, from one to six; the lots were laid out forty chains in width along the south boundary by retracing the northern boundary of the township of Springer from one to fourteen inclusive, and I found only twenty-seven chains, twenty-five links left for lot fifteen to the northwest angle of Springer, instead of thirty-seven chains as shown on sketch furnished me. From the post at the northwest angle of the township of Springer, the west boundary was drawn on a course north astronomically as per instructions. In carrying out the survey I ran the line between concession two and three from the east to the west boundary, on a course west astronomically making the lots forty chains in width to lot fifteen returning to side line between lots ten and eleven. I ran north astronomically to the north boundary. The western portion of the survey was then completed in the manner set forth in instructions, and finally I worked east completing the work at the northest corner of the township.

The latitude of south boundary I assumed as north 46° 27' 16". The variation of the needle was found to be west 6° 15'. Astronomical observations were taken frequently during the progress of the work, the details of which will be found among returns of survey.

I have to report about one-third of this township fit for settlement. The valley of the Sturgeon River, which traverses this township from southeast to northwest, is clay soil with an occasional vein of sand, which when cleared will make excellent farming land; while a fair portion of township may be described as sandy loam, the best land is along the Sturgeon River and northern or central portion of the township, the other portion being rocky and generally unfit for settlement.

Considerable white pine is scattered over the whole of the township, the southwest quarter is a very valuable limit of timber, the pine being of large growth and good quality, some very good pine was also found in the northwest quarter of the township, and the township generally is covered with a thick growth of white birch, balsam, spruce, cedar, tamarack, etc., here and there a few maples, some very good groves of cedar suitable for telegraph poles, and tamarack timber suitable for railway ties being met with.

As before stated the Sturgeon River traverses this township from northwest to southeast, eventually falling into Lake Nipissing. It is a stream about three chains in width and fifteen feet in depth, very suitable for driving purposes. The Tomiko River is the principal stream coming in from the northeast, and various creeks from other portions of the township—some of them being outlets of lakes—find their way into the Sturgeon River; a few lakes, as shown on my plan of the township, were met with.

The general character of the township is undulating, but not broken, here and there a cliff, but no very high hills are met with. The formation is granite and is but scantily covered with soil in many places, especially in the southwest, northwest, and northeast portions. I did not observe any traces of valuable minerals, and saw no rock but ordinary granite.

Access to this township is at present by Lake Nipissing and the Sturgeon River, but the Canadian Pacific Railway will doubtless afford the means of settlement at an early day.

There being no squatters in the township no Inspection Returns are necessary.

I have the honor to be, Sir,
Your obedient servant,
(Signed) H. R. McEVOY,
Provincial Land Surveyor.

RIGA GOODS.

The London *Timber Trades Journal* says that a correspondent favors it with the following extract from a letter from Riga:—"The manufacture of wood goods at Riga will during the coming season be conducted on a considerably reduced scale. In the first instance it will be remembered that last winter was highly unsuitable for the felling or transporting of timber, in consequence of which circumstance a much smaller quantity of logs reached Riga than usually is the case, which again influenced the price to a degree preventing the millowners from buying anything like their usual stocks.

"But the great check to production will come from the Fire Insurance Companies, throwing as they do serious difficulties in the way for the renewal of expired policies of sawn goods.

"It is hardly surprising that the companies should try to resort to extraordinary measures in view of the numerous and highly disastrous fires in timber yards, mills, &c., during the last years in Russia and Finland; but we find this stipulation quite prohibitory to trade, viz.:—"that the insured is to take a quarter of the risk himself." The rate of insurance has recently been raised to 3 per cent. on these kinds of goods, and the stockholder has thus actually to pay 4 per cent. on the insured amount, of which 25 per cent. is not recoverable in case of accident.

"It is rumoured that a firm of large mill-owners and shippers will give up the timber trade entirely, in order to engage in another branch of business on account of the above mentioned difficulty to insure their goods. Partly for the same reason, and partly from want of logs, two other saw-mills have stopped work, and one mill burnt last year has not been rebuilt. The above three mills turned out and shipped more than 30,000 standards. Thus this quantity will at least be less exported than last year, not counting that the rest of the mills will also have to restrict their production for reasons mentioned above."

Old Timbers.

The posts of a railing recently put up in the new office of the Sycamore Powder Company, on Market street, Nashville, are carved out of white oak timber cut about forty-five years ago, at Sycamore Mills, in Cheatham County, Tenn. The timber out of which these posts were made was used by the late Judge Samuel Watson in the construction of a mill-race, and lay immersed in the water over forty-two years, when they were taken out, and after being seasoned, Maj. Eugene Lewis, manager of the Powder Company, had them fashioned into their present shape. The wood is as sound as it was the day it was cut, and has become almost as hard as iron, and turned a very dark, almost black color.—*Southern Lumbermen.*

THE *Lumberman's Gazette* of Bay City, Michigan, says:—That the immense snowfall and other peculiarities of the weather have greatly interfered with logging operations all over the country, is undoubtedly true, and that a great shortage in the anticipated cut will result is also undoubtedly true. It may be said that the elements, by their late unpleasantness have been playing into the hands of the lumbermen, in interfering with the enormous output of logs which had been anticipated. In fact it may be stated with a great deal of truth, that the elements have conspired to prevent the average lumberman from committing business suicide.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Jan. 30th, 1882 and 1883, and also the Consumption for the month of Jan., 1881 and 1882:—

	Stock, Jan. 30th. 1882.	*Stock, Jan. 30th. 1883.*	*Consumption for the month of Jan 1882.*	*Consumption for the month of Jan 1883*
Quebec Square Pine	284,000 ft.	258,000 ft.	99,000 ft.	64,000 ft.
" Waney Board	318,000 "	245,000 "		
St. John Pine	16,000 "	8,000 "	16,000 "	48,000 "
Other Ports Pine	35,000 "	47,000 "	2,000 "	19,000 "
Red Pine	30,000 "	58,000 "	— "	7,000 "
Pitch Pine, hewn	523,000 "	624,000 "	50,000 "	43,000 "
" Sawn	324,000 "	522,000 "	113,000 "	57,000 "
Planks	74,000 "	84,000 "	8,000 "	8,000 "
Dantzig, &c., Fir	46,500 "	46,000 "	9,000 "	23,000 "
Sweden and Norway Fir	13,000 "	21,000 "	3,000 "	—
Oak, Canadian	337,000 "	304,000 "	10,000 "	31,000 "
" Planks	78,000 "	105,000 "	33,000 "	17,000 "
" Baltic	61,000 "	34,000 "	3,000 "	6,000 "
Elm	50,000 "	43,000 "	3,000 "	8,000 "
Ash	17,000 "	9,000 "	1,000 "	5,000 "
Birch	106,000 "	68,000 "	21,000 "	34,000 "
East India Teak	13,000 "	13,000 "	1,000 "	— "
Greenheart	34,000 "	128,000 "	11,000 "	4,000 "
N. B. & N. S. Spruce Deals	16,803 stds.	20,122 stds.	1,069 stds.	4,462 stds
" Pine	984 "	1,500 "		
Quebec Pine & Spruce Deals	7,253 "	8,085 "	579 "	447 "
Baltic Deals	3,025 "	4,348 "	98 "	184 "
" Boards	145 "	361 "	58 "	89 "
" Boards Flooring	1,756 "	3,395 "	137 "	344 "

AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett & Co.'s last report, dated Melburne, December 20th, says:—Notwithstanding the advanced rates for money now ruling, operations in the building trade continue as brisk as ever, and although the consumption of timber continues on the same large scale as reported by us in all of our issues during the present year, stocks are steadily accumulating, and in view of the large quantities yet to arrive we do not anticipate that present rates will be maintained, unless great caution is exercised by importers in handling their stocks. American lumber.—This line has fully sustained our ideas of an advance on last month's rates, and we believe that higher prices will be obtained at the next offerings at auction, as the trade holds stocks sufficient for requirements. We report sales ex Penobscot, Childers, Loining, and Abbie Carver. Prices realized were :—For w. p. shelving (inferior), 12 in., £9 2s. 6d. ; 14 to 15 in., £8 15s. : Michigan clear pine, 1½ in. to 4 in., £18 2s. 6d. ; 1½ in. to 2 in. Canada do., £18 to £17 17s. 6d. ; 1 in. dressed clear, 12 in. to 14 in., £16 7s. 6d. to £16 2s. 6d. ; 12 in. to 14 in. shelving, £11 5s. to £9 5s., according to quality ; Michigan clear pine, 1½ in. to 8 in., £18 10s. to £17 5s. ; dressed clear, 12×1, £16 2s. 6d. ; 12 in. ordinary shelving, £11 per 100 ft. super.

THE ENGLISH WOOD MARKET.

We take the following from Messrs. Robert Coltart & Co's. annual wood circular, dated Liverpool, January 31st, 1883 :—

Quebec Yellow Pine.—The import during the past season has exceeded that of 1881 by 24 per cent. In the early part of the year the stock of both square and waney pine was unprecedently light, and prices ruled extremely high. The arrivals during the year met with ready sale at full prices until towards the close of the season, when they became rather easier, but as the stock now held is comparatively small, consisting of only 503,000 feet, full prices are again demanded. It is gratifying to find that the trade have been able to import this wood profitably at the present high prices, in the face of the large stocks of, and low prices for pitch pine. The total consumption during the year has consisted of 1,950,000 feet, against 2,013,000 feet in 1881. The sales have been, of waney board pine, of prime quality, 15 inches average at 2s 1d per foot, 18¾ inch average at 2s 7d per foot, 19¾ inch average at 2s 7d per foot ; of prime square pine, 18 inch average at 2s 6½d per foot, and deck plank wood at 2s 6d per foot ; good fair average square, 15 inch average at 2s. 2½d. per foot, and 12½ to 14 inch average at 2s. 1d. to 2s. 2d. per foot. The import of St. John pine has consisted of 2,081 logs against 1,690 logs last year. Of Miramichi pine, sales have been made, of 13 to 14 inch average, at 20d. per foot, and of Newfoundland pine, 14 to 14½ inch average at 23d. per foot.

Red Pine.—More business has been done in this article than for several years past, the import having consisted of 135,000 feet against 51,000 feet in 1881, and the present stock consists of 58,000 feet. The sales have been—of 27 feet average at 14½d. per foot, 35 feet average at 16½d. per foot, and 50 feet average at 20d. to 20½d. per foot.

Quebec Oak.—The import has slightly exceeded that of last year, but there has been a fair consumption, and the stock on hand is very moderate. With inferior wood the market has been amply supplied and sales have been difficult to make, but the supply of prime wood has been limited, and prices have shown little variation, the sales having been—of 53 feet average at 2s. 10d. per foot, of 65 feet average at 3s. per foot, 55 to 64 feet average at 3s. to 3s. 1d. per foot, and 68 feet average at 3s. 2d. per foot.

Elm.—There has been a fair enquiry for this article at steady prices, and the consumption has exceeded the import, which consisted of 125,000 feet. Prices have shown little change, the sales having been—of 50 feet average at 23d. per foot, 54 feet average at 2s. to 2s. 1d. per foot, 45 feet average at 2s. 0½d. per foot, and 45 to 50 feet average at 2s. per foot.

Birch.—The arrivals have been light during the year, and as the consumption has been on a fair scale, sales have been readily made at good prices. The present stock is light, consisting of 72,000 feet, against 106,000 feet at the same time last year. The sales have been—of St. John, 14/8 inch average, at an average of 20½d. per foot, 15 inch average at 17⅛d. to 18½d. per foot, and 15½ inch average at 20½d. per foot. Parcels of Lower Port wood have realized 16½d. per foot for 15 inch average from Halifax, 16½d. per foot for 14 inch average from Miramichi and Dalhousie, and 13d. to 14d. per foot for Prince Edward's Island wood.

Quebec Pine Deals.—The import during the past year has amounted to 21,116 standards, against 18,930 standards during 1881. During the first few months the demand was dull and prices declined, and the early shipments being pressed forward by steamers at low freights, there was a further fall in values to a point below the cost of import, which, however, was recovered before the end of the season. The present stock amounts to 5,822 standards, being about equal to that held at the same time last year. Prices opened at from £20 to £22 10s. per standard for 1st quality, £14 to £15 per standard for 2nd quality, £9 10s. to £10 per standard for 3rd quality, from which, about June, they declined about 15s. per standard, but have since recovered to about the opening prices.

A SHORT CUT.

There is a strong probability that the cut on some of the streams will fall short of what was intended to be put in, and it is rather paradoxical that the majority of the operators are rejoicing over such a prospect. Before they put their forces in the woods they knew there was a large stock of lumber at nearly every point, and that a heavy production this season would have a decided tendency to push prices downward ; nevertheless they prepared to cut more logs than were ever cut before in one season. A few concerns, understanding that conservatism would be a jewel, pulled in their sails in part, but the others went right ahead, declaring at the same time that there would likely be an overstock, and that the only legitimate outcome would be cheaper lumber. Now that Providence has stretched out a hand to help them, albeit they would not help themselves, they grasp the hand with all the fervor of an old friend, and declare that things do sometimes come right in spite of them. One of the largest operators recently visited the *Lumberman* and stroked his beard with satisfaction at the outlook, and expressed a belief that 75 per cent. of the intended cut would put as much money into the manufacturers' pockets as the entire anticipated cut would—and without much doubt he reasoned well. The *Lumberman* has held for some time that it would be wise on the part of the saw mill men of the Northwest to regulate the supply by the demand—to avoid putting two boards on the market when the demand called for but one—and it is rather pleased to know that so many have accepted its teachings as correct, notwithstanding they have not cultivated sufficient nerve as yet to live up to them. The prosperity of the lumber industry depends largely upon steady prices, and the *Lumberman* has no sympathy with the man who would push the prices of lumber ruinously low, providing they could, and none with those who would force prices to such heights that the demand, in part, would be choked off.—*Northwestern Lumberman.*

U. S. LUMBER TARIFF.

The New Orleans *American Lumberman* contains the following communication under the heading "Unjust Discrimination :"

Alexandria, La., Feb. 12, 1883.

I notice with much surprise and regret the action of the Senate of the United States in passing a bill to take off the duties on Canadian lumber. This is an injustice to a large industry, and to many men, now being supported by it, for the following reasons :

1. There is about three hundred million dollars, and one million men engaged in the business, and a reduction if made at all should be gradual, say 50 cents per m. at a time—and not violent—such as taking the whole $2.00 off at once.

1. Careful estimates by practical lumbermen show that the forestry bulletins of the Government are unreliable, as there is a much larger quantity of white pine in the Northern States than the Government agents report.

3. There cannot possibly be any scarcity of lumber for a century after the Northern States have been depleted of their standing pine, for the reason that there are larger tracts of yellow piue in the Southern States.

4. This can be all used where white pine is now used, by using *thinner* boards for boxing, building, and most other purposes, by which the difference in *weight*, as relating to transportation will be overcome, as a yellow pine board five-eighths of an inch thick—timber—in proportion. and the duty on lumber should be retained so that our Southern States may have the benefit of northern capital to develop this vast industry, which I am afraid will not be done for years if Canadian lumber is admitted free of duty.

5. Everything to produce lumber in Canada is at least 25 per cent. cheaper than in any part of the United States.

6. The average price of lumber to the consumer is about $20 per thousand feet, and the present duty of $2 is only 10 per cent. of its selling value in the States, and as probably nine-tenths of the people who use lumber are people above the laboring classes, the duty is not in any sense a burden upon the community.

7. Consider the difference it will make to the States having these large tracts of yellow pine—Mississippi, Georgia, Florida, Louisiana, Arkansas, Missouri, and North and South Carolina—whether they are developed, or left comparatively untouched, as they certainly will be *for years*, if Canadian lumber comes in free of duty.

I would like to see some action taken by your lumber exchange, and if possible a meeting called, and the subject ventilated, and memorials circulated and sent to to our representatives, protesting against having an injury done to our infant industries. Yours,

Long Leaf Pine.

Messrs. Whitesides, of Champlain, N. Y., have purchased seven hundred cords of wood from Mr. Bachand, of Roxham, Que., at $1.50 per cord and are drawing it to their paper mills.

A new industry in the Southern States is the making of pressed wooden plates. A factory in Newbern, N. C. is turning out 100,000 per day, and there are two other factories, one at Frankford, Delaware, the other at Sunderland, Vt., for making the same articles.

The Parry Sound *North Star* says :—The Maganettawan Driving and Boom Company, has been granted Letters Patent by the Lieutenant Governor in Council. The members of the Company are : Hon. W. E. Dodge, Arthur M. Dodge, and H. Dodge, of New York, U. S. ; Jesse S. Peckham, Waubaushene, Ont. ; Henry L. Lovering, of Coldwater ; James Scott, of Waubaushene, and James H. Buck, Byng Inlet. The object of the Company is to operate the rivers tributary to the mills of the Maganettawan Lumber Company at Byng Inlet, in this district.

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

25 in ball and 5 in heel are the numbers usually required.

☞ PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

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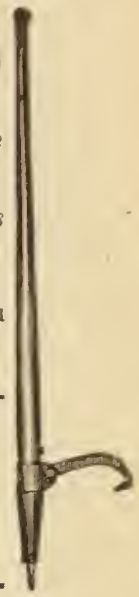

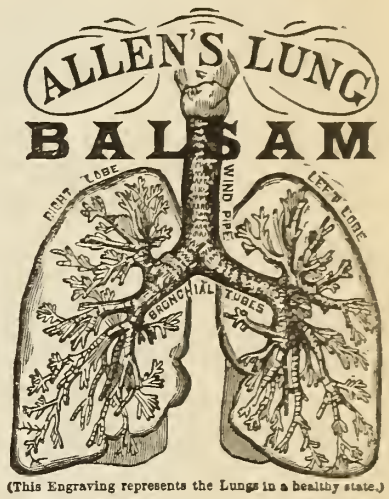

(This Engraving represents the Lungs in a healthy state.)

THE WAY IT WILL AFFECT YOU.

It excites expectoration and causes the lungs to throw off the phlegm or mucous; *changes the secretions and purifies the blood;* heals the irritated parts ; gives strength to the digestive organs ; brings the liver to its proper action, and imparts strength to the whole system. Such is the immediate and satisfactory effect that *it is warranted to break up the most distressing cough in a few hours time*, if not of too long standing. *It is warranted* to give entire satisfaction, even in the *most confirmed cases of Consumption! It is warranted not* to produce costiveness (which is the case with most remedies), or affect the head, as it contains no opium in any form. *It is warranted to be perfectly harmless* to the most delicate child, although it is an active and powerful remedy for restoring the system. *There is no real necessity for so many deaths by Consumption*, when Allen's Lung Balsam will prevent it if only taken in time. Physicians having consumptive patients, and who, having failed to cure them with their own medicine, we would recommend to give Allen's Lung Balsam a trial. *Sold by all Druggists.*

PERRY DAVIS' VEGETABLE PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat. Coughs, &c. Used externally, it cures Boils, Felous, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitteu Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

FORESTRY IN CANADA.

The following paper was read by A. T. Drummond, of Montreal, at the meeting of the American Forestry Congress at that city :

Perhaps no trade question has around it at the present time so much interest as that of the conservation of our forests with a view to the continuance of the lumber industry. This industry has once more revived, and very large demands are now being made on our lumber supplies. Public attention cannot, however, be too strongly directed to the fact that these timber supplies are not unlimited. The drain which has been going on for thirty years past on the resources of our forests, has been so vast and so continued that the questions are now being forced upon us—for how long a time CAN these resources be depended on, and what efforts are being made to provide for that supply being continuous? It is perfectly clear that under the present system of farming out the public lands, the time is near at hand when the supply of merchantable standing timber will not equal the demands made upon it, and it is imperative that means should at once be adopted to preserve and recuperate these timber lands. Those who are familiar with the localities—each year extending further northward and westward—where the lumbermen obtain their logs, cannot be blind to the fact that the area in which the pine may be expected to be found of mercantable size and in fair abundance, is not so extensive but that another few years of working the timber limits to the extent done in the past, must result in a marked diminution in our exports of white pine. It is not with timber as with other agricultural products. Reproduction cannot take place in a year or a decade. It must be recolleeted that not until the pino is from seventy-five to one hundred years old is it of good mercantable size for square timber, and that thus at least three-quarters of a century would be required to make these timber limits what they were. And what has been the experience in Maine and Michigan? The pine forests of both these States were thought to be inexhaustible, and gave employment to many thousands of men. Bangor, on the Penobscot, was one of the busiest spots in New England—so many mills lined the river banks, and so many vessels frequented the port for lumber. Now the scene is largely changed. The pine lumber manufactured there has fallen from 102,000,000 feet in 1856 to 63,000,000 feet in 1866, and to 14,000,000 in 1877, whilst the total production of pine, spruce, and hemlock boards was not in 1877 one-half in amount what it was in 1866. Again, in Michigan, the Saginaw Valley is being rapidly depleted, and to supplement the supply to its numerous mills, whose capacity is 600,000,000 feet, logs have to be brought from other large rivers long distances away. But most important of all is the fact that the lumber journals of the Western States admit that in the three states of Michigan, Wisconsin and Minnesota—the main sources of lumber supply in the West—there does not, with the present demand, remain of standing pine timber sufficient for ten years to come.

Even greater destruction has resulted from forest fires, not only by reason of the immense areas through which the fires sweep, but because both large and small trees are alike destroyed. Another incidental but most important result arises from the fact that after forest fires, the first growth always consists of poplar, birch and other trees, though whether the pine, which is of slower growth, gradually in the course of long years, asserts its position and overshadowing these in turn replaces them, is a question which observation has not yet had time to settle.

Tree planting has not yet impressed itself on the people of Ontario and Quebec as an idea necessary to carry out. Hitherto, the ambition of most farmers appears to have been to clear the land as soon as possible, and to be content if enough of wood suitable for fuel and farm use is left. Whilst lumber was cheap and the supply appeared almost inexhaustible, it would not appear necessary to most land owners to provide for the future. Besides, men are selfish, and disinclined to go to labor and expense in regard to what does not promise immediate results, the advantage of which they will not themselves reap. And yet if we revert to the condition of the Ontario Peninsula, as it was fifty years ago, abounding in splendid walnut, whitewood, pine and oak trees, nearly all of which have been cut down long since, and when we remember the greatly increased value which, especially walnut, lumber now has, we cannot help seeing of what immense benefit to the rising generation it would be had the trees, as cut down, been at once replaced by young trees of the same species. Already many of these young trees would have been of fair marketable size. The Maine Board of Agriculture in a memorial presented to the State Legislature, very pointedly refers to the duties of individuals on this question. "Men need to be taught," says the memorial, "that we have no moral right to follow blindly an instinct that leads only to present personal advantage, regardless of widespread future evils as a consequence ; that we are but tenants of this earth, not owners in perpetuity ; and that we have no right to injure the inheritance of those who succeed us, but rather a duty to leave it better for our having occupied it the allotted time. Men need to be taught to plant trees and their children to plant and love them. Owners of good lands in Maine or elsewhere will in the future learn that their bleak fields, if judiciously planted with wood to the extent of 40 per cent. of area, will produce on the remaining 60 per cent more in all kinds of crops than the whole does now or can be made to do under any other possible course of treatment. Lands well sheltered can and do produce winter wheat in Maine as well as in New England or on the new lands at the West." In accordance with this memorial, the State Legislature provided for exemption for twenty years from taxation of all cleared lands on which forest trees had been successfully cultivated for three years, and maintained a thriving condition thereafter. Nearly all of the Northern and Western United States have in this way statutes to encourage the planting and growth of timber trees, and the effect of encouragement in this respect has in the Western States been most valuable.

Prof. Sargent, of Harvard University, tells us that "as moderators of the extremes of heat and cold, the benefits derived from extensive forests are undoubted, and that our climate is gradually changing through their destruction, is apparent to the most casual observer. Our springs are later ; our summers are dryer, and every year becoming more so ; our autumns are carried forward into winter, while our winter climate is subject to far greater changes of temperature than formerly. Twenty years ago peaches were a profitable crop in Massachusetts ; now we must depend on New Jersey and Delaware for our supply ; and our apples and other orchard fruits now come from beyond the limits of New England. The failure of these and other crops in the older States is generally ascribed to the exhaustion of the soil ; but with greater reason it can be referred to the destruction of the forests which sheltered us from the cold winds of the north and west, and which, keeping the soil under their shade cool in summer and warm in winter, acted at once as material barriers, and reservoirs of moisture."

The influence of belts of trees on local climate is, in fact, very marked. They form obstructions to and ward off, on the one hand, the cold winds from the north which would lower the temperature and, on the other hand, the parching winds which would unduly raise the temperature and equally injure vegetation ; they break the effects of storms, and in the winter time cause the snow to be equally distributed over the fields, forming thus a uniform protective covering to the ground ; and if generally distributed over the western prairies they will promote the more equal distribution of the rainfall, and will prevent the streams from being dried up, as they usually become after midsummer. Observing agriculturalists have found that fields protected by belts of trees yield crops much more prolific than those not so sheltered.

In our timber regions the replanting of the pines can be to some extent left to nature, but there is every reason, since the timber limits belong to the Government, and a large annual revenue is derived from them, why the Government should, especially in the land which has been burned over by forest fires, institute a regular system of tree planting. There is all the greater reason for this because of the fact that, after a forest fire, trees of different species from those which were previously there, usually spring up. The expense would be comparatively trifling, and certainly insignificant, when placed beside the results which posterity would derive from it. To individuals there may seem little inducement to plant pineries which may not be available to the fullest extent for towards three-quarters of a century, but Governments can have no such feeling, considering that what would be done by them would be for the future benefit of the country and a source of revenue in that future as well. What the Governments can and should also do is to, as far as possible, by legislation and the insertion of clauses in their leases of timber limits, prevent the occurence of forest fires and preserve the younger trees from injury at the hands of the lumbermen. The experience which we are yearly realizing of gradually diminishing areas of timber supply and the now nearly exhausted condition of the United States pineries, makes this matter a subject of pressing national importance which, if our legislatures do not now take up, they will probably find twenty years hence that it is too late.

The question of tree planting must arise in our North-West, and the sooner it is grappled with, the better for the welfare of the future millions who are expecting to people the vast prairies west of Winnipeg. In the matter of fuel alone, its importance may be estimated from the fact that there are extensive tracts of western territory where the farmers journey from ten to twenty miles by waggon or sleigh in order to obtain fuel, or where they have to rely solely on the wood train which at intervals supply them ; and such farmers are often exposed to positive suffering when extensive snow blockades take place. The prairie farmer, indeed soon knows the value of a belt of trees on his farm, not merely as a source of fuel and fencing, but even more as a windbreak warding off the fierce blizzards in winter, and in summer sheltering his growing crops, fruit trees and stock from the strong prairie winds which, developing into storms, cause almost every season vast injury.

It is not at all improbable that the planting of forests on the prairies in Manitoba, Dakota and Iowa, will be the solution of that most embarrassing problem—the grass-hoppers—by affording obstructions to the high winds which bring these insects from their habitats farther west, and by furnishing suitable homes for myriads of birds which would keep the increase of the grass-hoppers in check.

The planting of forests will also probably solve the question of the successful growth of fruits in Manitoba and the Northwest. Fruit trees need protection alike from storms and from parching winds, and especially in our western prairie country is this necessary. It has been laid down as almost an axiom in the western States, that the forest trees must precede the fruit trees in order to afford such protection.

In Minnesota an earnest effort has been made to encourage the planting of trees. A State Forestry Association has been organized, and annually offers premiums for the largest number of trees planted on a day in May denominated Arbour Day. It is estimated that in the spring of 1877 there were 5,290,000 trees planted in Minnesota, and of these over half a million were put in on Arbour Day. During the entire planting season of that year it is believed that about ten millions of trees were planted, and of these, that about seventy per cent. have lived.

The question of tree planting is one which should be actively taken up at once in our Northwest. The Government of Manitoba could not grapple with a more pressing subject for legislation, unless it be drainage. The greatest drawbacks against which the Northwest has to contend, from an agricultural point of view, are wet lands, scarcity of timber, and liability to high winds, and, in some localities, to summer frosts. Dakota and Minnesota have equally these drawbacks. The Manitoba Legislature has taken up the question of drainage, and active efforts are now being made in some parts of the country to reclaim the wet lands. To cope with storms and frosts seems hopeless, and yet experience has found the great value of belts of trees around each farm as affording effective shields against these. What the Government there should do is to promote Forestry Associations, and to, in every way, encourage tree planting by exemption from taxation or by direct premiums or bonuses. Any such encouragement successfully followed up will be returned one hundred fold in the larger and more certain crops, the store of wood for lumber and fuel created by the growing timber, the relief from the monotony of the prairie landscape through the belts of trees dotting the scene on every side, and not least, in a more contented and prosperous community of farmers.

THE LITTLE PINES.

MALVERN, ARK., February 5, 1883.

A correspondent of the *Northwestern Lumberman* writes as follows :—

You ask, in your issue of January 27, the cause of the absence of young pines in the vast yellow pine forests of the south, and discredit the theories of their being killed off by the annual fires and by hogs. In the early summer, after a very wet spring, the hogs are troubled with kidney worms, more or less, and when thus affected they eat the roots of the young trees. Again, the fires, in a yellow pine forest of any density, are slow fires of sufficient vigor and duration to kill off trees five or six years old. Another reason is that the pine straw keeps the seed away from the soil to a very considerable extent, and it is eaten by birds, squirrels, etc. These, however, are not the main causes. The lack of light and heat is against the young trees in the deep woods, and without these the yellow pine is a dwarf in the richest soil. The observer will notice primitive forests in all the old fields of the south in nearly every stage of growth, from the infant plant to the tree of 20 inches in diameter. Here, a field of one year's growth, completely filled with trees knee high, and as thick, so to speak, as the hair on a dog's back ; another of some three years' growth, with the future forest a little marked out by the sturdy growth of, say, 10 per cent. of the little trees, the smallest beginning to show the effect of the shade ; then another of five or six years' growth, showing the effect of last fall's burning over—all the little ones entirely burned off and one-half of the larger ones killed, leaving enough to shade the ground perfectly ; still another field presents a clearer demarkation of the future timber land, all the trees having an appearance of being the same age, yet only about one-third of them promising more than a stately sapling.

The young pine growth in stumpage clearings bids all fear of a lumber famine to "gie awa :" and although it is true that the same soil will not produce the same kind of pine where the loblolly has grown, it is not true of the long-leaf, the yellow pine par excellence of the United States. This variety reproduces in the same soil with increased vigor, caused by the more regular fires of the settlers, who are sure to be found where the saw mills have been—who burn off the woods every year to improve the range and prevent forest fires, thus keeping the young forest thinned out, admitting air, sunshine and heat. —W

PULP MILL IMPROVEMENTS.

The *Northwestern Lumberman* says :—The Umbagog Pulp Mill Company, of Livermore Falls, Me., has been making improvements. A canal has been dug, and general changes made, which are thus outlined by a local paper : The main building has been removed down the river 220 feet, and a heavy wing dam extended from the main dam to the mill. The mill is now 36x70 feet in size, with an L of 25x30 feet, three stories high, used for boiler, store and finishing room. The flume of the mill is laid on the solid ledge. The material is of the best pine lumber bolted together in the most thorough manner, and the iron required for making bolts and rods for the flume is estimated to weigh 6,000 pounds. The flume is 50 feet long, 12 feet high and 16 feet wide on the inside, with an extension on the front to receive the bulkhead, in which are five gates, each 5x6 feet. The flume, with the extension, is 28x16 feet on the front. The driving power will be supplied by six water wheels of the most im-

proved pattern, under about 18 feet head. Four grinders will be placed in position at once· The log will be taken from the river, pass over a large circular saw, which will cut the bolts into right lengths for use. They will then be carried by a belt to the barking-machine; from thence to the double splitting machine, which will require four men to run it, and thence to the grinders. After leaving these, it is conducted below, into steam cylinders, and pumped by power, on the wet machine, so called, where the fiber is separated from the water, and taken off in sheets of clean. white pulp, suitable for making into paper, paper boxes, etc. It is then packed in bundles of 100 pounds each for market. When the mill is fully equipped, it will furnish employment for about 40 operatives.

Importance of Small Industries.

Speaking in Congress the other day of the need of encouraging certain relatively small industries, Senator Miller referred to the city of New York, the greatest manufacturing city in America—he might have said in the world—and "yet she has not a cotton mill, a blast furnace, or a rolling mill within her borders. Her manufactories are small," he said, "but they employ more than a quarter of a million people."

It is worthy of notice in this connection that while recent patents have much to do with the means and methods of the great staple industries, such as steel and iron production, iron milling, cotton and woolen manufacture, and the like, the smaller yet in the aggregate immensely important industries are almost wholly based upon and due to the development of recently patented inventions.—*Scientific American.*

The Tariff Question.

The *Northwestern Lumberman* says:—The tariff question still broods like a cloud of doubt over the lumber business, especially at the East. A correspondent from Nova Scota writes that an unusual effort is being made in that province to get in a large log crop. It is possible that the operators have an eye to the removal of the lumber duty, and intend to be ready for the main chance as aginst Ottawa and the Georgian Bay. It is noteworthy, however, that wages in Nova Scotia are higher than in previous years, and that labor is scarcer. It is barely possible that lumber cannot be produced any cheaper in the Dominion than on this side of the line, which would equalize the value of forests products on both sides as naturally as water finds a level.

Red Lake Pine.

Jhe Gaand Forks *Plaindealer* says that the men interested in the growth of that place still have their anxious eyes on the Red Lake pine, and do not intend to be put off their gaurd because there is silence regarding the Washburn bill. The *Plaindealer* asserts that the pine of the Red Lake region is tributary to Grand Forks, and that city has the enterprise and capital to obtain and manufacture it into lumber, which can be furnished to the country to the westward at prices lower than are paid at Minneapolis. Every move is watched, the friends of Dakota in Congress are kept posted as to the wants of the territory, and it is hoped that the schemes of the Minneapolis men will be baffled.

The Tariff and Hemlock.

The Saginaw valley lumbermen are especially exercised about the effect of the tariff bill on hemlock lumber. One of them is said to have reported that the vast quantity of hemlock in Michigan is just coming into market, but if the duty on foreign lumber is removed, the Wolverine hemlock cannot compete with the Canadian product in Eastern markets. The country in northern Michigan is being cleared up, and the hemlock will be burned up if it cannot be cut and marketed. For this reason it is thought that placing lumber on the free list will particularly damage the hemlock interest.—*Northwestern Lumberman.*

The U. S. Tariff.

The *Northwestern Lumberman* say:—The opponents of free trade in lumber have bestirred themselves since the senate act in placing lumber on the free list, and thousands of names have been forwarded from all parts of tho Northwest in opposition to the measure, while the promoters of the petition movement at Chicago have been flooded with correspondence urging, in nearly every case, the holding of a convention. As, however, it is deemed certain that the question will not be settled by this congress, or, if reached, will be defeated, it is not considered advisable by the Chicago committee to call a convention at this time.

A THOROUGH dosing of raw turpentine will clear hickory of the ravages of worms, destroying those already at work in the timber. It is a good expedient for carriage makers and others.

A GRAPE-SHOT has been found imbedded in a pine tree in Jackson county, Ala., seven miles west of the Apalachicola river. It is supposed to be a relic of one of Gen. Jackson's Indian fights in the Seminole war.

THE *Northwestern Lumberman* says:—There was lately cut at F. N. Wright & Co's. camp, a little north of Stanton, Mich., a forked tree, which turned out 31 logs, but one having been rejected, 30 sound logs were obtained from the tree.

THE *Northwestern Lumberman* says:—House & Bros. are buying bird's-eye maple in Ogemaw county, Mich., to be shipped to New York city for veneering purposes. They will have shipped from Ogemaw county, when they have done, 50,000 feet. They are paying $11 a thousand.

WHAT is called the boss cherry log of the country was recently got out at Potter, Pa. It was cut by James McNultv on Bingham's land at Ellison's pond, was 18 feet long, sound and clear, and scaled 1,550 feet. The scaler pronounced it the largest and finest cherry log he had ever seen. It was all there was in the tree, weighed 10,850 pounds, and was worth $150.

JAMES HARRIS, of Rising Sun, Ind., while engaged in sawing veneering from a walnut knot, discovered in the twisted fibres of the wood a perfect delineation of a spaniel's head. The lines are said to be as accurately drawn as if from the pencil of an artist, and so true is the semblance that even the expression of mute intelligence one often sees in canine visages is readily seen.

IT is stated there are now more hemlock logs in the Allegheny river, Pa., between Condersport and the State Limits mill than there ever was before. The sleighing has been good and the streams frozen over. On account of unfavorable hauling conditions, it is said there was two years' supply of logs back in the woods at the opening of the present season. There is estimated to be 40,000,000 feet of logs in the water.

THE *Northwestern Lumberman* says:—The Flint & Pere road, in Michigan, is running about 15 log trains. The quality of the logs brought out is said to be better than those of last year. The Harrison branch of the road will be extended 12 miles beyond Harrison, which will increase the product of the road about 500,000,000 feet, while the branch built last fall from Coleman will open up about 700,000,000 feet.

Letter from Member of Congress.

HOUSE OF REPRESENTASIVES,
Washington, D.C., Feb. 19, '82.

GENTLEMEN,—Inclosed find $1, and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a had cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GROUT.

LITTLE BY LITTLE.—The constant dropping of water will wear away even the hardest stone. So the constant irritation of a cough will so wear upon the lungs as to induce incurable Consumption. Hagyard's Pectoral Balsam will cure the worst cough, speedily and effectually.

WALTER LINTON, of Waterloo, writes that Hagyard's Yellow Oil has done great good in his family, his wife being cured of Callouse lumps that other medicines failed to remove, he he also states that a neighbor was promptly relieved of Rheumatism by the same remedy.

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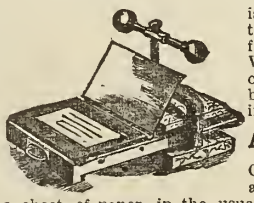
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This Oil is abstracted from peculiar species of small White Shark, caught in the Yellow Sea, known as CARCHARODON RONDELETII. Every Chinese fisherman knows it. Its virtues as a restorative of hearing were discovered by a Buddhist Priest about the year 1410 Its cures were so numerous and many so seemingly miraculous, that the remedy was officially proclaimed over the entire Empire. Its use became so universal that for over 300 years no Deafness has Existed among the Chinese People. Sent, charges prepaid, to any address at $1.00 a bottle.
Hear What the Deaf say!
It has performed a miracle in my case.
I have no unearthly noises in my head and hear much better.
I have been greatly benefited.
My deafness helped a great deal—think another bottle will cure me.
"Its virtues are UNQUESTIONABLE and its CURATIVE CHARACTER ABSOLUTE, AS THE WRITER CAN PERSONALLY TESTIFY, BOTH FROM EXPERIENCE AND OBSERVATION. Write at once to HAYLOCK & JENNEY, 7 Dey Street, New York, enclosing $1.00, and you will receive by return a remedy that will enable you to hear like any body else, and whose curative effects will be permanent. You will never regret doing so."—*Editor of Mercantile Review.*
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L11-w22-1y

THE CANADA

LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. MARCH 1, 1883.

AN Ottawa correspondent says :—The timber cut on the Mattawan this year will bo an unusually large one.

THE demand for California redwood in the east is increasing. It takes a good finish, and presents a good effect.

ARKANSAS claims to possess more valuable hardwoods than any state in the Union. Her forests are attracting considerable attention.

A TREE was recently cut in Hemstead county, Ala., that measured 26 feet in circumference. It took six men, working contantly, half a day to foll it.

THE throne to be used at the Czar of Russia's coronation has been ordered. It is to be made of black oak, richly carved in antique Slavonic patterns, and will cost over $8,000.

THE *Northwestern Lumberman* tells us that it is said that T. B. Walker, of Minneapolis, Minn., sends logs into Manitoba, and has them sawed there. He thus escapes the duty on sawed lumber, and makes well on the scheme.

ACORNS from America are in demand in Europe, for the propagation of oak forests. A special agent for the forestry department recently shipped 300 bushels of red oak acorns and 120 bushels of pig nuts to England and Germany, where they are to be planted next spring.

THE *Northwestern Lumberman* says that Robert Jackson and a Canada party talk of building a mill at Depere, Wis., for the purpose of sawing a quantity of Menominee pine that he owns. The logs will be towed on Green bay to Depere. They intend to saw 10,000,000 feet this year.

THE Ottawa *Citizen* says that parties down from the Kippewa say that the timber cut there this season will be considerably larger than that of the preceding year. The snowfall has been such as to render the work more easy than in general. Some forty shanties are in operation, worked by well-known Ottawa firms and jobbers.

THE floods have been doing an immense amount of damage through various sections of the country, particularly in Ohio and Pennsylvania. A recent estimate for Ohio placed the lumber carried away by overflowing streams at 25,000,000 feet, and shingles at 15,000,000. The damage has been heavy since these figures were made.

THE Hon. William H. Stiles, of Franklin county, Vt., in a recent address, stated that he was somewhat surprised at the size of spruce logs that were recently taken from land that was cleared of that kind of timber down to trees 12 inches in diameter 30 or 40 years ago. The logs now taken off are, some of them, 16 to 18 inches in diameter.

ENGLISH milling engineers are introducing square rope belts, which are said to be very suitable for transferring power. They are made in strips with "step" joints, screwed together; the sides of the rope leaving the pulley groove without loss of power. It is stated that 1½ inch rope, at 4,000 feet a minute, has driven over 100 horse power.

The *Wood-Worker* says :—It is predicted that the prices of walnut lumber will rule somewhat lower the coming season. The reasons for this belief are the extensive additions to facilities for cutting and transportation, in the way of new mills and tramways through herotofore inaccessible sections. Yards havo full stocks of this lumber, with a dull markct and weak prices.

THE Tennessee Lumber Company has built a large new mill at Cincinnati. The building is 50x100 feet, and two stories. Several railroads have access to it. A tunnel reaches from the mill to the Ohio river, by means of which logs are driven on a truck direct. The mill will be well equipped. The company has another mill at Chattanooga, and one at Hinch Mountain, Tennessee.

THE *Monetary Times* says :—It is the opinion of lumber dealers that a shortage in production is to be expected this season in the Northern Ontario district—with which may probably be included the Western Peninsula—equal to 20 per cent., under an averago soason's product. The excossive depth of the snow has kept operations back, and the increased cost of lumbering has deterrod some oporators. American buyers have not appeared in this market as yet; a feeling of uncertainty as to the pending action of Congress on the Tariff probably keeps them back. Meantime the feeling here in lumber is firm and some lines of dry are likely to be scarce.

THE St. John, N. B., *Telegraph* says :—Lumbermen in this province report that the present winter has been a most advantageous one for their operations. There is plenty of snow in the woods for hauling, while it is not over deep; the crust has not been hard and the brooks have kept woll frozen, the weather having been clear, cold and steady throughout, Considerable business is being done in ship knees and futtucks, which are bringing better prices than have been obtained for many years. Most of this class of timber at present being got out, goes to the United States market, whore the demand for it is very strong. The season has been very favorable for digging the roots, the frost not having gone very deep into the ground.

THE SOUTH VS. CANADA.

The New Orleans *American Lumberman* discourses as follows :—The Chicago lumber dealers represented by the Chicago Lumber Company, effected an association a few days since. They favor free lumber from Canada, and to that ond they agreed upon a heartrending petition to Congress to admit lumber free from Canada. After alluding to the census statistics, which they presume are incorrect, from the fact that they believe there is enough white pine standing to supply the country for twenty-five years, they then quote the prices of lumber in 1878 and 1883, to show that the advance in the lower grades has been from 45 to 65 per cent. They continue: "The upper grades of lumber have advanced in still greater ratio, showing plainly that unless new markets of supply be opened, lumber in the future will be a luxury only attainable by the rich, while all improvements and settlements in the new states and territories must cease."

Their panacca is free lumber from Canada, but seeing at once that this alone is an argument of no special value, they turn tail and bid for the support of their opponent in the following manner: "In fairness to the men who object to free lumber, from a feeling that it will greatly and suddenly depreciate their property in pine lands and logs, we call your attention to the fact that the entire present capacity of the saw mills of Canada is not of sufficient volume to materially lower prices, and it is not so much to lower prices as to guard against continued and ruinous advances in the price of building material, so essential to the development and progress of our country, and the total extinction of our white pine forests, with all its deplorable consequences, placing the citizens of our country at the mercy of foreigners, who control the only available white pine accessible to our country."

If this association would exhibit as much zeal in getting fair rates of freight from the South to Western points, as they do in getting lumber from Canada, they could easily find a sufficient supply of the best of lumber—which is not rated a luxury, by a good deal. Let them help to develop the forests of the South first, then they may turn their attention to Canadian interests.

KNOCK-DOWN HOUSES.

The Bay City *Call* calls for somebody in that wood-working city to engage in the manufacture of houses in the "knock-down," and suggests particularly the probability that a good business in this direction can be done in furnishing ready-made houses for summer resorts. The suggestion is a good one. It has come to be such a fashion for people of independent means —and some whose means are not so very independent— to "resort" to the eligible sites on the shores and islands of the great lakes for a summer sojourn, that there is a great demand for light structures in which to live during the season of relaxation. Doubtless many more people than hitherto would seek a summer retirement if a handy means of obtaining a neat and comfortable pavilion were provided. A ready and sufficient supply always creates a demand greater than would otherwise exist were there no such supply. Now that the summer-resort boom has grown to such considerable proportions, it seems as if the furnishing of ready-made cottages on a large scale could be made a profitable business. The same scheme might embrace the supply of necessary light, portable furniture. Then a resorter could order his out-fit of the knock-down house factory, have it shipped to the designated locality the same as he would his trunk, and in a day or two after arrival he would be living comfortably under his own roof by the lakeside. If the scheme were once under full headway it would become very popular, and develop an important industry in the preparation of portable summer cottages.—*Northwestern Lumberman.*

UNITED STATES TIMBER LANDS.

Congressman Valentine proposes to make the woodsman spare the tree by law. He lately introduced in the house a bill, the provisions of which direct the secretary of the interior to withdraw from market the fine timber lands remaining undisposed of, which are chiefly valuable for fine timber of merchantable value. It furthsr directs him to employ a sufficient number of examiners skilled in woodcraft to make an examination of the pine lands already surveyed, and report a full description of them, giving the quality and quantity of pine and other timber growing thereon, the distance from navigable streams and railroads, and such other matters tending to fix the value of the land. It provides that a copy of this report shall be filed at the local land office, and a copy with the secretary of the interior. It makes it a crime for any examiner to file a false report, punishable by fine and imprisonment. After the making and filing of the reports the secretary of the interior is authorized to offer the lands for sale in the manner now prescribed by law, but the notice of sale shall contain a description by legal subdivisions, and the quality and merchantable value of the lands. The reports of the examiners are to be at all times open to inspection. Any land offered for sale and remaining unsold shall thereafter be subject to sale at private entry at their appraised value.—*Northwestern Lumberman.*

THE NIPISSING DISTRICT.

We have given at full length the reports of two of the most important surveys in the District of Nipissing, and we must be content with extracts relating to the remaining townships.

TOWNSHIP OF DUNNET.

Mr. R. A. McEvoy, P. L. S., says :—There is some valuable pine timber in the township, the best being in the central part as shown by timber map. A small area of maple was found on lots four and five, concessions four and five. The remaining green bush is balsam, spruce, tamarac, cedar birch, and poplar. On what is known as brule, a thick growth of white birch, poplar, cherry, etc., has sprung up.

TOWNSHIP OF HUGEL.

Mr. W. O. Johnston, P. L. S., says :—The greater portion of this township has been overrun by fire and the timber destroyed. Some of the north part has also been burnt again last year. The northwest corner of the township, however, is green bush and contains a considerable amount of good pine, but the other timber is not of marketable value, being mostly white birch, small spruce, balsam, tamarac, and some poplar.

TOWNSHIP OF RATTER.

Mr. F. Bolger, P. L. S., says :—The township is generally level throughout and contains little good land. The face of the country is rocky and stony, with light sandy soil, the prevailing timber being white and red pine, balsam, poplar, white birch, with scattered groves of hemlock and tamarack.

Towards the centre of township pine predominates of a merchanteable quality. The westerly part of the township has been burnt over, all the timber being utterly destroyed, about one sixth of the township has thus been devastated.

TOWNSHIP OF KIRKPATRICK.

Mr. C. D. Bowman, P. L. S., says :—Nearly the whole of the township has been burnt over, there being only about eighty chains of unburnt land found along the lines run, the balance being thickly grown up with small poplars, birch, alder, etc., with occasionally the trunks of large dead pines, while in some places there was no trace of the original forest left.

There being no squatters or improvements in the township no inspection returns will be required. The whole of township with the exception of about twenty chains on the west boundary and a few chains on the front of the sixth concession, being brule, no timber plan will be nccessary.

TOWNSHIP OF HAGAR.

Mr. F. Purvis, P. L. S., says :—Bush fires have destroyed nearly all the timber. The only pine, or in fact any timber worth mentioning, is on lots one and two, concessions, one, two, and three. There is a small island of timber at the junction of the northwest branch with the La Veuve River, and another in lot eight, concession five. That portion of the township lying south of the river is a brule, with scattered red and white pine, with some tamarac, balsam, and white birch, aud is covered with dense undergrowth and fallen timber.

TOWNSHIP OF DRYDEN.

Mr. F. O. Bolger, P. L. S., says :—Its timber timber resources are very limited, the greater portion of it having been destroyed by fire. Along the northern boundary—in several instances extending over the sixth concession—some good pine exists, either in groves or in a scattered form.

The only stream calling for notice is the Wahnapitae River, which has a large and constant flow of water, admirably adapted for the driving of logs and timber, although much broken by falls and rapids.

TOWNSHIP OF WILKES.

Mr. J. W. Fitzgerald, P. L. S., says :—That part of the township lying south and east of Tea and Manitou Lakes and north concession ten can only be described in a general way, as a

tract more or less broken by ridges of hardwood and mixed green timber separated by swamp valleys in which the prevailing timber is tamarack. In the uplands where maple, beech, and birch predominate the land is stony in many places to such a degree as to render cultivation impossible.

The timber is very mixed and mainly consists of hemlock, spruce, tamarack, white birch, poplar, balsam, etc., mostly under average size. There is but little pine scattered over this part, although tamarack and spruce of fair dimensions are occasionally seen.

It may be worthy of remark here that although the country for miles north, east, south, and, I believe, west of this township, has been lumbered over for thirty years years or more, not one stick has yet been cut in it for that purpose.

The township also is singularly free of fallen timber. Excepting along the north shore of Long Lake on the south boundary, and for a distance of about half a mile east of it no evidence of fire or fallen timber to any extent was met with on the survey.

SPRUCE AT LIVERPOOL.

The *Timber Trades Journal* of Feb. 10 says: Our Liverpool correspondent, referring to the article of spruce deals at his port, last week, wrote:—"The consumption for this month has been nearly four and a quarter times as great as that of last year. From this it might be inferred that the case-making and building trades were in a most flourishing condition, but he would be a bold man who would assert this to be the fact; but if we look a little further we shall find that much of this excess is attributable to the increased imports, which are 1,150 standards in excess of last January, and this has been forced of by auction at low prices, in addition to the ordinary cousumption through private sales." Another factor which has operated to increase the recent consumption of spruce deals, or rather to draw from Liverpool for consumption inland, was that when spruce deals were selling at over £8, as they were some three months ago, inland buyers relied as much as possible upon their stocks, aud bought only what they actually required for immediate use, and which their stocks would not supply them with. Consequently, stocks inland became seriously reduced, and on the arrival of the new cargoes, which were offered at moderate figures, the opportunity for re-stocking was made use of. Whether, when stocks are made up to the average, the present rate of consumption of spruce will continue appears to be doubtful.

MIRAMICHI PINE DEALS.

The following letter appears in the London *Timber Trades Journal*:

SIR,—The paragraph in a colonial contemporary directing attention to the remark which appeared iu this *Journal* some time back anent the rapid decay of Miramichi pine deals when standing in the pile, has induced me to seek for the cause which produces the effect. That Miramichi deals do decay more rapidly than Quebec deals is certain. It would appear that the wood possesses constituents which encourage or provide for fermentation, for when the deals are piled with any insufficiency of air space fungus almost immediately forms. Dry rot in any case attacks Miramichi deals that are kept long in stock, and this fact makes holders always anxious to quit them.

The cause of the rapid decay is unquestionably of a chemical nature. and I should say it is the presence of vegetable acids peculiar to the material which gives to the wood this unfortunate character.

My observations, I should add, have not been made in London, for I have no experience of the wood trade there.

HEMLOCK BARK.

The *Shoe and Leather Reporter* says that the tanners of this country are periodically treated to prophetic warnings that the time is not far distant when they must seek some other tanning agent than hemlock bark, as the forests are becoming rapidly denuded. This hue and cry of short supply is not confined to bark alone. The reminders are quite as persistent that as there has been no epidemic in South America during the past year, all must run short of nips for upper leather. Forebodings of scarcity of hides and of bark have been so often repeated that they would receive little heed now, even if there were any ground for them. The bark supply shows no sign of diminution. Dealers did for awhile scare consumers into putting up prices from $9 to $13 per cord in Woburn and Peabody and other tanning towns in Massachusetts, but that set the peelers at work in such a lively way that the tracks at the large distributing points were crowded to excess to accommodate the heavy shipments, and hundreds of cars incumber the side tracks. The market has weakened; contracts have been closed for large quantities at $11.50 per cord, and the tendency is still downward. In the meantime, with high-prieed hides and bark, and low-priced leather, the tanners are having a bad siege of it. There may come a period when bark will be a scarce article, but it is too far in the future to have any place in our present calculations.

THE ENGLISH TRADE.

Messrs. James Smith & Co's. circular says:—For the year now opening much will depend on the action of the trade on this side, as well as on the demand from the Continent, the Colonies, and the United States, all of which are now becoming very large consumers; and as the cost of production of timber is everywhere becoming enhanced, through scarcity of men, higher wages and cost of provisions, and longer distances to haul the logs, prices generally may be considered much too low, and without firmness and caution in buying and shipping no good result can be looked for this season to shippers or receivers. As regards the freight market, the class of wood vessels, usually brought into this trade is fast disappearing by loss, and is not being replaced, except by steamers, which are, so far, not so convenient and workable as sailing vessels, and the rates for which cannot be so reliably calculated, being more susceptible to severe fluctuations. There is no doubt that the various ports will soon have to meet this great change, as the present dock system is far from being applicable to steam carrying for the wood trade. Rates are slightly firmer than last spring.

HEMLOCK IN THE STATES.

The *Northwestern Lumberman* says:—There is a firm feeling that there will be a decided decline in Pennsylvania hemlock lumber this season. The facilities for getting it have never been so large as they will be this year. Railroads have been constructed recently that tap extensive hemlock forests, and will give outlets that heretofore have been closed. One thing is in favor of the manufacturers of hemlock lumber—it can be produced cheaply under favorable conditions. Stumpage can be bought very low, and the price is made still lower when the sale of the bark obtained from the trees is taken in consideration. If a man has a mill with plenty of hemlock surrounding it, and can load the lumber on cars right in his mill yard, many dollars per thousand are not required to give him a good profit. We hear of efforts to sell at from $2 to $3 per thousand under prices of a year ago. Possibly, however, the flood in the Susquehanna will change the aspect of things somewhat.

Breaking Up.

It has been stated in several newspapers that the camps on some of the streams were breaking up, with a probability that all work would come to a standstill. Such stories are usually very fishy, and should be so considered. A force that has been obliged to quit creates a great commotion on reaching a settlement. Because these particular men and teams are out of the woods, of course everybody else is breaking camp and will be right down. It's a rare season when there is not more or less breaking up before spring. When the hauling is hard and the expenses run up unexpectedly, it is as natural for the small jobber to get weary and fall by the wayside as for water to run down hill. Occasionally the principal will advance funds to keep the fainting man on his feet—this depends somewhat on what kind of a heart the principal has, and how he looks at the case financially. To help the man along he may consider will be cheapest in the end. There are others who stop work, not for the lack of money, but because if they work at all they are obliged to spend too much of their time among treacherous swamps.—*Northwestern Lumberman.*

Great Tree Planting Contract.

By directions of Sir Henry Loch, K. G., Her Majesty's Commissioner of Woods and Forests, a large extent of Crown land in the Isle of Man is about to be planted with forest and ornamental trees. About 500 acres are now being so planted on the mountain called Archallagan, where cabins have been erected by the contractors for the accommodation of the men. Messrs. Little and Ballantyne, Knowsfield Nurseries, Carlisle, have been entrusted with the contract (one of the largest of the kind ever entered into in Great Britain), and already the first instalment of a quarter of a million of young trees has been shipped from the Carlisle nurseries for the work.

Spruce Gum.

The *Northwestern Lumberman* says:—The loggers of Maine are far removed from society, but they do not neglect to put in their spare minutes in a way that tends to make the ladies happy. They gather all the spruce gum they handily can. Every spruce tree is not productive of gum, but when one is felled that is, the loggers profit by it. Occasionally a live Yankee, with a stock of socks, mittens, etc., wanders up through the woods, and swaps his goods for the gum that the men may have secured. The gum in the woods brings from 30 to 45 cents a pound, and is worth $1 in Portland. In this city it is worth, at retail, $2 per pound.

LUMBER

Shingles, Doors, Sash, Flooring, &c.,

WANTED,

STATE QUANTITIES AND PRICE TO

SHORE & DAVIS,

Head Office, 514 Maine Street, **Winnipeg, Man.**

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McCraken, Gall & Co.,

WHOLESALE AND RETAIL

LUMBER MERCHANTS

And MANUFACTURERS,

☞Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c. American and French VENEERS.

Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.

Yard: Cor. Wellington & Strachan Aves.

FACTORY: Corner Soho and Phœbe Streets.

OFFICE: 39 Adelaide Street East, (First Floor, nearly opposite the Post Office.

L5 TORONTO, ONT. 1y

Notice to Contractors.

SEALED TENDERS, addressed to the undersigned, and endorsed "Tender for Newcastle Harbor Works," will be received at this office until WEDNESDAY, the 14th MARCH, next, inclusively, for the execution of

Works at Newcastle Harbour,

ONTARIO,

according to a plan and specification to be seen on application at the office of the Town Clerk, Newcastle, where printed forms of tender can be obtained.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honorable the Minister of Public Works, *equal to five per cent.* of the amount of the tender, which will be forfeited if the party decline to enter into a contract when called on to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

By order,

F. H. ENNIS.
Secretary.

Department of Public Works,
Ottawa, 19th Feb., 1883. 3d46

FOR SALE!

The MURRAY BAY LIMITS

COMPRISING ABOUT

330 SQUARE MILES.

These limits control the whole territory on the Murray River. The limits are very valuable, heavily timbered with Spruce and Pine, interespersed with valuable hard woods, Poplar and White Birch. Apply to

D. C. THOMSON,

4L3 QUEBEC.

MINNESOTA

PINE LANDS

FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF

8,000 ACRES

Of PINE LANDS, in St. Louis County, Minnesota, carefully selected and estimated to cut **FORTY MILLION FEET**, well located on good driving stream, tributary to Duluth.

A. McCALL,

6L1 Lumber Merchant, Simcoe, Ont.

NOTICE.

SEALED TENDERS addressed to the Superintendent General of Indian Affairs, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of SATURDAY, 10th MARCH, 1883, for the delivery of the usual Indian Supplies, duty paid, in Manitoba and the North-West Territories, consisting of Flour, Bacon, Groceries, Ammunition, Twine, Oxen, Cows, Bulls, Agricultural Implements, Tools, &c.

Forms of tender and full particulars relative to the Supplies reqnired, can be had by applying to the undersigned or to the Indian Superintendent, Winnipeg.

Each Tender must be accompanied by an accepted Cheque of a Canadian Bank for at least five per cent. on the amount of the tenders for Manitoba, and ten per cent. on the amount of the tenders for the North-West Territories, which will be forfeited if the party declines to enter into a contract when called upon to do so, or if he fails to do the work contracted for. If the tender be not excepted the cheque will be returned.

The lowest or any tender not necessarily accepted.

[No newspaper to insert without special authority from this Department through the Queen's Printer.]

L. VANKOUGHNET,
Deputy of the Superintendent
General of Indian Affairs.

Dept. of Indian Affairs,
Ottawa, 30th Jan., 1883. 2t4

PUBLIC NOTICE

TRADE MARKS. TESTED

Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

And Beam Engine Marks.

It having come to the knowledge of Messrs. Thoma Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of J and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.

Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,
EAST PARADE,
SHEFFIELD, ENGLAND,

Solicitors to the said 6L3

THOMAS JOWITT & SONS

STOCKS IN CLYDE PORTS.

We take from the *Timber Trades Journal* the following Comparative Table showing Import and Consumption of Timber in Clyde Ports during 1080, 1881 and 1882 :—

	IMPORT.			CONSUMPTION.		
	1880.	1881.	1882.	1880.	1881.	1882.
	Pieces.	*Pieces.*	*Pieces.*	*Pieces.*	*Pieces.*	*Pieces.*
Yellow pine logs	47,954	42,260	35,500	50,051	43,300	42,139
Red pine	13,241	6,094	6,400	6,650	6,500	8,161
Oak	6,789	6,943	8,172	6,283	6,693	7,766
Elm	5,712	4,625	2,563	2,225	2,935	4,943
Ash	2,215	2,381	1,060	1,687	2,371	1,619
Birch	9,676	7,256	4,318	7,921	6,978	6,050
Pitch pine (hewn and sawn)	36,409	57,565	52,798	30,708	47,000	48,739
" planks	60,286	38,267	46,000	41,757	42,700	57,275
Canadian deals	1,003,262	415,704	756,763	601,000	720,800	638,251
New Brunswick and N. S. deals	773,344	895,826	475,423	692,300	900,600	538,359
	Mille.	Mille.	Mille.	Mille.	Mille.	Mille.
Staves, Quebec	436	175	247	382	307	164
" States	203	500	850	362	450	598

COMPARATIVE STATEMENT OF STOCK IN CLYDE PORTS, (GREENOCK TO GLASGOW INCLUSIVE) AT 31ST DECEMBER 1880, 1881 AND 1882.

	1880.	1881.	1882.
	Cub. ft.	*Cub. ft.*	*Cub. ft.*
Quebec waney boardwood	672,525	767,531	731,445
Quebec square Yellow pine	1,316,200	1,127,900	807,176
Quebec red pine	387,232	372,306	302,538
Lower port yellow pine	4,189	1,133	—
Baltic red and white pine	130,311	94,965	47,750
Pitch pine—hewn	197,924	620,194	358,185
" —sawn	245,221	480,187	716,344
" —planks	92,419	69,997	22,309
Quebec oak logs	319,344	348,500	360,178
" elm	146,888	244,781	136,611
" ash	32,367	35,855	35,158
" and lower port birch	60,230	62,436	19,619
" maple	—	8,154	15,043
" cherry	—	1,442	2,282
" hickory	5,991	3,961	13,394
" whitewood	633	3,468	1,115
" Tamarac	1,511	1,123	32
Walnut	4,824	24,824	8,253
Sycamore	—	—	12,682
Chestnut	—	—	2,396
Teak	360,300	338,000	141,400
Greenheart	50,454	16,865	55,798
Spars, Vancouver	56,890	45,280	34,155
Spruce spars	15,662	42,659	41,452
Pitch pine masts	5,280	1,498	771
Quebec 1st pine deals	548,430	271,451	105,292
" 2nd pine dls,	80,102	29,242	51,792
" 3rd "	387,150	271,599	432,983
" 4th "	129,100	81,869	95,958
" red "	134,000	59,154	42,099
" spruce deals	144,810	75,538	288,060
Michigan 1st pine deals	—	—	16,852
" 2nd pine dls.	—	—	5,939
Lower port spruce deals	174,220	186,292	99,843
" 2nd pine dls.	158,600	174,898	87,953
	Mille.	Mille.	Mille.
Quebec pipe staves	47	12	40
" puncheon "	166	49	119
U. States staves	30	80	329

FORESTRY REPORT.

We take the following from the report of the delegates appointed by the Ontario Commissioner of Agriculture to represent the Province at the meetings of the American Forestry Congress at Cincinnati and Montreal :—

The delegates, in view of the information obtained at the several meetings of the American Forestry Congress, beg leave to make the following recommendations :

I. That such of the public lands as are more suitable for the growing of timber than for agricultural purpose, be retained by Government as a part of the public domain.

II. That within this timbered tract scattered portions be leased to persons suitable to act as forest police, to protect the timber lands from trespass, guard against fires, remove fallen timber, and act under instructions.

III. That no trees shall be cut, whether pine, spruce, hemlock, or hardwood, on any of the public timber lands under fourteen inches in diameter at the stump.

IV. That no cattle, sheep, or swine be allowed to roam at large in any of the public woodlands.

V. That the lighting of fires in or near any woods from May to October, inclusive, be prohibited, under severe penalties.

VI. That a general stock law be enacted, prohibiting cattle, sheep, and swine from running at large in any part of the Province, unless the municipal council of any municipality shall pass a by-law authorizing their running at large within that municipality.

VII. That encouragement be given to farmers to plant timber lots of not less than ten acres on each farm of one hundred acres, and maintain the same as a timber lot, from which cattle must be faithfully excluded. Such encouragement may be given by exempting the timber lots from taxation so long as the same are maintained and properly cared for.

VIII. That encouragement be given to farmers to plant and maintain shade trees along the public highways and the boundary lines of farms, by granting out of the Provincial treasury, a sum of ten or twelve cents for each tree so planted and maintained in a healthy and growing condition for a period of five years, provided the municipal council of the municipality in which they are growing shall have granted a like sum.

IX. That hereafter it be a condition in all sales or grants to settlers, that not less than twenty-five acres in every hundred shall be forever kept as woodland, under penalty of forfeiture of the whole, and that the covenant be made to run with the land.

X. That scientific and practical instruction in forestry be given to the students at the Agricultural College.

XI. That a competent conservator of forests be employed, with a sufficient staff, and clothed with adequate powers to see to the proper execution of all laws relating to the cutting of timber, lighting of trees, running at large of animals, etc., etc., within the timber lands of the Province.

XII. That as soon as practicable the management of the public forests be assumed by the Government, and all timber be cut and sold, trees planted, pruned, and cared for, and all matters relating thereto be conducted under the supervision of a chief forester.

XIII. That the grounds of the several public institutions be utilized as far as practicable as experimental stations, by planting thereon timber trees that promise to be of practical value, and testing their adaption to these several localities.

XIV. That Government cause accurate maps to be made of each County, shewing the area that has been cleared off, that has been destroyed by fire, and that is yet covered with timber, and indicating as far as practicable the quality of the standing timber.

XV. That a forest of acclimation be established at the Agricultural College, Guelph, in which shall be planted such forest trees of other countries as may probably become acclimated in this country, and prove to be valuable for economical or ornamental purposes.

All of which is respectfully submitted,

D. W. BEADLE,
WM. SAUNDERS,
WM. BROWN,
P. C. DEMPSEY,
THOS. BEALL.

PRESERVING RAILWAY TIES

In Austria, Germany and France there are some 80 roads that use treated ties, and 33 of them have records of successful processes of treatment. The chloride of zinc method, or burnettizing, takes the preference for several reasons. Its practicability is the best established, the objections to its use are few, and the cost is slight. When applied, it is diluted 99 per cent. Kyanizing, or the use of corrosive sublimate, a poison, is dangerous, the workmen who use it running great risks. Convicts are usually employed for the purpose. Creosoting dates back in its use to ancient Egyptian history. Creosote and cedar oil were employed for embalming mummies, and for general purposes of preservation. The common refined tar used contains one per cent of creosote. When timbers are saturated with this they are highly inflammable, but the process is not particularly dangerous to the workmen. There are, in all, some 60 methods of treating timber, only a few of which have borne out a practical test. Pyroxyline of iron is used by repeated application by means of a hole in the timber, the agent dissolving itself and becoming diffused through the vascular tissues. Soaking in salt, using a solution of gas-tar, rosin and linseed oil ; charring the surface to protect the body ; steaming with creosote, to prevent dry mold ; applying sulphate of iron and sulphate of copper, are processes that have met with more or less satisfactory results. A beech fence has already stood 26 years, with sulphate of copper. Where dampness gathered around the spikes or nails driven into the material, a chemical action resulted which induced decomposition. The expedient was adopted of dipping the spikes in tar. There are several solutions employed for petrifying, such as carbonate of lime, alum and potash, steaming with cloride of lime and diluted sulphuric acid, etc., but common or Glauber's salt seems as feasible an agent in this way as any that has been tested. In the German experience, creosote costs eight times more than chloride of zinc. There a tie is treated at a cost of 6 cents, while the Houstan & Texas Central road finds its creosoting process to cost 60 cents per tie. Superheated steam is also held to weaken the wood by destroying the vascular tissues. By simply dissolving old zinc in acid, chloride of zinc can be made for about 2½ cents per pound, or it is furnished in tanks at 3½ cents. The patentee figures the cost of impregnating ties, with the apparatus in proper operation, at about 8 cents each. The average life of a tie is found to be about five years, while preserved ties can readily be made to last, as they have in Europe, 25 to 30 years.

The Royal Railroad Company, of Hanover, Germany, has sent several specimens of burnettized timber by the patented process, as follows: Part of the middle of a pine tie which served on the road from 1852 to 1879 : a piece from the centre of a beech tie which lay in the road from 1854 to 1879 ; a piece from the centre of an oak tie which lay in the road from 1854 to 1879 ; and other specimens. E. Buesch, of the Grand Ducal Railroad, and author of a German work on the subject of timber-preserving, makes some statements of the same character. He tells of pine ties lying in a road from 22 to 25 years, and when taken out, because of damage to the road, they were undisturbed so far as decomposition was concerned, being made into fence-posts and used in other ways. C. Shaler Smith, city engineer of Omaha, Neb., states that the treatment of wood diminishes its tendency to swell or contract, as observed in timbers put into a bridge at St. Louis, the amount of expansion depending on the wood used. He further says : "I used sweet gum, a wood which rots in four months and swells one inch and a half in 16, as the best wood to experiment with, as it could be had at $10 per thousand. The bridge pavement is nearly two years old, is in first-class condition (the traffic is so great that the average life of a three-inch plank was only four months), and out of 1,800 square yards I have had to relay only 260 yards on account of hammocking, and this on the first batch laid; with cedar, oak, pine, ash or elm there would have been no hammocking at all. It is easily prevented by dipping the blocks in coal tar after treatment, or laying them diagonally. I laid the bridge blocks with one-fourth inch joints. Hereafter I will immerse the blocks in liquid asphalt or creosote, and without any joints at all.—*Northwestern Lumberman.*

GERMAN FORESTRY.

At the meeting at Cincinnati last year of the American Forestry Congress the following communication from Richard Von Steuben, Royal Chief Forester of the German Empire, was read.

FALKENBURGH, near Dommitzsch,
District of Torgau,
March 11, 1882.

MOST HONORED SIR,—I thank you most sincerely for your cordial invitation to the opening exercises of the National Forestry Association. It is, however, to my greatest regret, impossible for me to accept the same. Irrespective of all personal considerations, I am bound here by the onerous duties of my position as an officer of the King ; for a trip so far and time consuming, I would have to crave leave of the Minister, which I cannot do so soon after the long leave of absence given me last fall, especially not during the planting season, when the superintending officer can least be spared.

I regret most exceedingly that I cannot attend the opening exercises, since it is certain that your Association will be productive of much good to the whole country. During my stay in the United States last fall I had occasion to discuss the question of the rapidly growing necessity of introducing a regulated Forest Government in order to prevent future calamities which must undoubtedly result from a reckless destruction of the forests. Even the Honorable Secretary of the Interior, at Washington, honored me with a consultation on the subject.

There can be no doubt that every country requires a certain quantity of well stocked woods, not only to supply the demands for building material and fuel, but more especially to secure suitable meteorological conditions, to preserve the fertility of the soil, and out of sanitary considerations. The ratio of the minimum quantity and judicious local distribution of the indispensable forest to the aggregate area cannot be expressed by a universal rule, but the same can only be approximated by scientific investigation. Above all things, it is essential to prevent forest destruction where such would injuriously affect the fertility of the soil. It is important, then to preserve and to cultivate judiciously those forests which stand at the head-waters and on the banks of the larger streams, because through their indiscriminate destruction fluctuations in the stage of water, sandbars, and inundations of arable lands are occasioned. It appears also necessary to preserve and properly cultivate woods in quicksands, or on the summits and ridges, as well as on the steep sides of mountains, along the sea coasts, and other exposed localities.

In Germany, and especially in my more narrow bounded fatherland, Prussia, it is regarded as of the greatest importance, not only to preserve the forests already there, but to extend them as much as possible.

In the National Appropriation Bill large sums are set apart for the purchase of such lands as are unfit for cultivation, and for utilizing the same by planting trees.

In the German Empire 25.7 per centum of the aggregate area is occupied by forests—that is, 13,873,065 hectares out of 53,074,041 hectares. In Prussia the percentage of wooded land is 23.4 per centum of the entire area—that is, 8,124,520 hectares out of 34,750,903 hectares. Of the Prussian forests about one-third belong to the State, to wit, 2,648,892 hectares, which produce a gross income of about fifty five million marks. The Government foresters come within the province of the Minister of Agriculture and Forests. At the head of this department is the Chief Master of the Forests ; in each governmental district is the Forest Master, who serves as a member of the Governmental Commission, and the entire forest area is divided into 680 principal forest districts. Each forest district is separately valued, and for each separate part regulations are devised, which are strictly followed, thus attaining the chief object, of so regulating the annual amount of wood-cutting that a continuous gain in material and money is secured, and even increased. The forest government is devised with the minutest detail, and may well lay claim to being termed exemplary ; it strives not only to utilize the forest as a source of income, but rather are the Government forests used to continually satisfy the requirements of the country.

In order to obtain a situation as Government officer of the forests, a course of study of sever-

al years at the Forest Academy is required. After which follows about ten years' preparatory service before a definite engagement can be made, the qualifications for which must be proved by several examinations even for the minor positions in the Forestry Department; several years' apprenticeship and considerable preparatory service connected with the military service in the Hunters' Corps, and two examinations are required. Besides the real Government forests there are the forests of the Faithful Royal Veterans, Community Forests, Corporation Forests, &c.

The forests of the Faithful Royal Veterans are governed entirely according to the principles of the State Government. The State exercises a supervisory power over the other forests named, so that even as to these a regulated system of government prevails. It is otherwise with forests owned by private individual, for they are not restrained in the use of their forests, and may, according to their own judgment, clear the same, and till the soil, in short, do what they like, and yet there may be certain restrictions placed on the free use of the same as soon as danger to the common welfare is feared; these restrictions are prescribed by the law of July 5th, 1875, relative to forest protection.

This law is applicable in cases:

1. Where by reason of the sandy nature of the soil, adjoining lands, or public grounds, natural or artificial courses, are in danger of being covered with sand.

2. Where through the washing away of the soil or through the formation of cascades in open places on the ridges of hill and on hillsides, the arable lands, streets or buildings lying below are in danger of being covered with earth or stone or of being flooded; or the lands or public grounds or buildings lying above are in danger of sliding.

3. Where through the destruction of the forests along the banks of canals or natural streams riparian lands are in danger of caving, or buildings hitherto protected by the woods are in danger of iceflows.

4. Where through the destruction of forests rivers are in danger of a diminution of the stage of the water.

5. Where through the destruction of forests in open places and near the lakes, neighboring fields are seriously exposed to the detrimental influences of winds.

In the cases above mentioned, which have been copied *verbatim* from the statute book, the manner of use as well as the culture of forests may be legally ordered, in order to prevent those dangers where the dangers to be averted are considerably in excess of the damages which would result to the owner by reason of the restrictions.

Excepting the restrictions prescribed by this law, the owner may dispose of his woods as he pleases.

Finally, permit me to remark that the larceny of wood and other products of the forests is punishable according to a law of April 15, 1878.

It is evident that these Prussian regulations are not at all applicable to the United States, as circumstances are so entirely different there. Unfortunately I am uot sufficiently familiar with them to venture an opinion as to judicious measures to be taken for the protection of the forests, and it would have given me great pleasure to have informed myself on the grounds and to have taken part in the deliberations.

I trust you will grant me the favor to inform me of the result of your sessions, and consider me always ready to give all desired information concerning, as well as our forest arrangements, as our usual mode of planting and cultivating trees; indeed, to give information of all kinds and at all times.

Permit me now, my dear sir, to thank you most heartily for your friendly invitation and to express my sincere regrets at my inability to accept the same. Give my kindest regards to the gentlemen of the committee. I wrote to Mr. Adolph Strauch a few days before the receipt of your letter. I thank you for your friendly wishes, and return mine most heartily.

I am, with greatest respect,

RICHARD VON STEUBEN,
Royal Chief Forester,

THE GLASGOW TRADE.

The *Timber Trades Journal* of January 20, says:—Prospects of the timber trade for the year now entered upon, though not in all respects promising, are of a generally favourable character, its main support being in the great and growing activity of Clyde shipbuilding.

YELLOW PINE.—The stock of Quebec waney board-wood amounts to about the same quantity as last year's, but much of it is of 2nd quality and not easily moved at prices now required. Rates about 2s. 2d. to 2s. 8d. Of square yellow pine, the stock is light comparatively; demand is quiet meantime, its high price being a check on the consumption; other goods at cheaper prices coming into competition. The market is bare of first-class deck-plank yellow pine.

RED PINE.—Stock comparatively moderate; good wood of large dimensions saleable. Recent prices 1s. 3d. to 1s. 7d.

OAK.—The year's import of Quebec oak is about 1,200 logs over that of 1881, and the consumption shows an almost corresponding increase. As a good deal of the stock at present on hand is not of the prime quality it is not so easily moved. Prices from 2s. 6d. to 3s. 5d., varying considerably according to quality. There have been large arrivals throughout, the year of oak-planks and scantlings from the States, per steam liners.

ELM.—Demand at present is quiet. Recent prices 1s. 8d. to 2s. The stock, it will be observed, is little more than half the quantity held a year ago.

BIRCH.—The stock on hand is unusually light. Prices have advanced considerably, especially in the latter part of the year. For Quebec wood, 15½ in. square, about 20½d. may be quoted; and for lower port about 17d, is the average rate, more or less, according to size and quality.

ASH.—The past year's import was light compared to that of the previous year, and the consumption shows a falling off, though not to the same extent. Present demand is fair; pure white wood in especial request. Prices range about 1s. 9d. to 2s. 2d.

WALNUT.—The import during 1882 from the States and Quebec is short of the previous years. Prices for good wood, medium and large sizes, range from 5s. to 5s. 6d., but drop considerably for small and inferior descriptions. The supply of walnut has not been sufficient for the wants of the market.

DEALS.—Quebec yellow pine. There is a comparatively small stock of 1st quality. Rates 2s. 3d. to 3s. 6d.; broad dimensions have brought high prices, 2nd quality are not readily sold. Prices of 3rd quality, the import of which (mostly per steamer) has been excessive, have undergone little change. Prices for 11×3 about 13½d. to 14½d., broad deals bringing a considerable advance. 4th quality, 11×3, sell at about 1s. Quebec spruce deals, 11d. to 13d.; lower port spruce, 10d. to 12d. Not many American spruce deals have been sold in the latter part of the year, the large import of deals from the Baltic coming into competition.

Alcohol and Paper From Wood.

The *Oesterreihischer Liquer Fabrikant* states that Messrs. Bochet & Machard now prepare both alcohol and paper from wood: 2,000 kilos. of wood shavings are treated in wooden vats with 8,000 kilos. of water and 800 kilos. of hydrochloric acid for 10 to 12 hours, steam being passed in the whole time, so as to keep the mass on a constant boil. When this operation is over the acid liquid is run off, neutralized with chalk, and fermented at at a temperature of 21°—25° C. The ligneous residue in the vats is washed and dried and worked up for paper.

Our Neighbors' View.

The *Lumberman's Gazette* of Bay City, Michigan, thus discusses the question of the United States lumber duties:—The lumber interest is thoroughly awakened at the attack made on the prosperity of this industry, and Congress will be besieged next week with powerful delegations representing $9,000,000 of capital and more than 1,000,000 American laborers whose prosperity is also imperilled in order to benefit Canadian industry. It will be strange if Congress refuses to deal justly with this class.

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LIGHTNING CANT-DOG

STEEL RING,

The Lightest, Cheapest and Most Durable Cant-Dog in the World.

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Build 4 Sizes Fire-Proof Champion Engines

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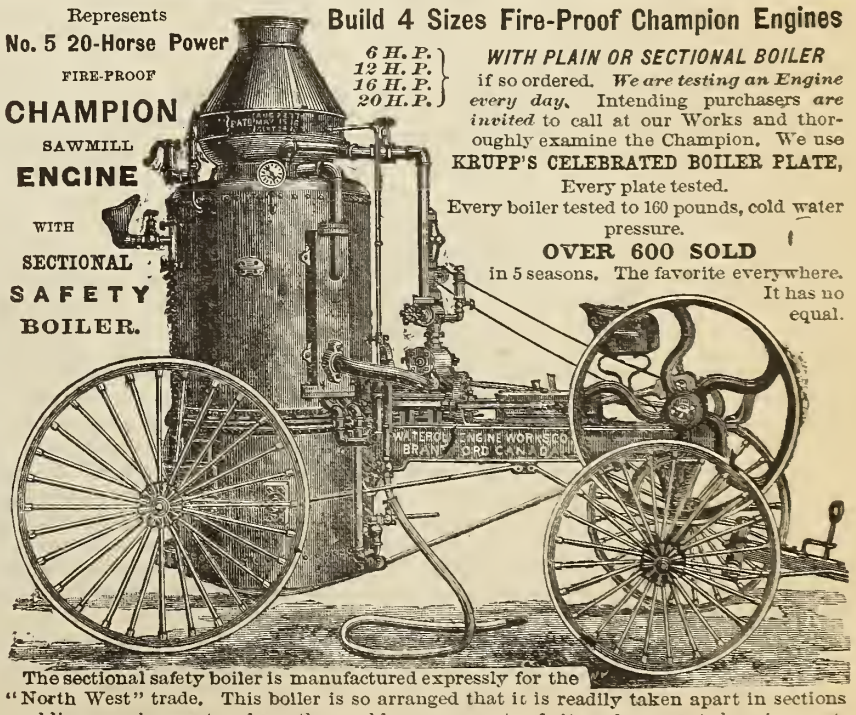
WITH PLAIN OR SECTIONAL BOILER if so ordered. *We are testing an Engine every day.* Intending purchasers *are invited* to call at our Works and thoroughly examine the Champion. We use KRUPP'S CELEBRATED BOILER PLATE, Every plate tested. Every boiler tested to 160 pounds, cold water pressure.

OVER 600 SOLD in 5 seasons. The favorite everywhere. It has no equal.



The sectional safety boiler is manufactured expressly for the "North West" trade. This boiler is so arranged that it is readily taken apart in sections enabling purchasers to clean thoroughly every part of it and prevent burning out. *We know from experience this is absolutely necessary with the alkaline waters of the great Western prairies.* Largely used by the Pacific Railway Company and all the large Colonization and Ranche Companies.

ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

Send for New Circular.

Market Reports.

MONTREAL.

From Our Own Correspondent.

Feb. 25.—Although prices as a rule have kept very firm during the past two weeks, business has been very quiet, and very little lumber, and that only in a retail way, has been changing hands. Very little movement is looked for till the spring trade opens which will be about the middle of Mach. We have no report as to how things are progressing in the lumber regions. The weather has kept very cold and without much snow falling. We repeat our last quotations which are ex yard as follows :—

Pine, 1st quality, ⅌ M	$35 00@40 00
P ne, 2nd " ⅌ M	22 00@24 00
Pine, shipping culls, ⅌ M	14 00@16 00
Pine, 4th quality deals, ⅌ M	11 00@12 00
Pine, mill culls, ⅌ M	10 00@12 00
Spruce, ⅌ M	10 00@13 00
Hemlock, ⅌ M	9 00@10 00
Ash, run of log culls out, ⅌ M	20 00@25 00
Bass, " " ⅌ M	17 00@20 00
Oak, ⅌ M	40 00@50 00
Walnut ⅌ M	60 00 100 00
Cherry, ⅌ M	60 00@00 00
Butternut, ⅌ M	35 00@40 00
Birch, ⅌ M	20 00@25 00
Hard Maple, ⅌ M	25 00@30 00
Lath, ⅌ M	1 75@ 0 00
Shingles, 1st, ⅌ M	3 00@ 0 00
Shingles, 2nd, ⅌ M	2 50@ 0 00

LIVERPOOL MARKETS.

The consumption of lumber during the month of January has been moderate. Spruce deals were sold by private bargain at £7 2s. 6d. and £7 5s., and by auction at £7 3s. 9d. to £7 5s. 3d., while some from Tetamagouche averaged only £6 17s. 6d The stock of Canadian lumber on hand for the month of January, 1883, with comparative figures for 1882 and 1881 was as follows :

	1881.	*1882.*	*1883.*
Quebec square pine	848,000	284,000	258,000
" waney "	812,000	318,000	245,000
Red Pine	60,000	30,000	58,000
Oak, Canadian & N. S.	500,000	337,000	304,000
Quebec deals	10,478	7,253	8,035

Wholesale quotations are as follows :—Quebec square white pine 1s. 7d. @ 2s. 5d. ; Quebec waney board pine 2s. 3d. @ 2s. 8d. ; St. John pine 18 inch average 1s. 10d. @ 2s. 4d. ; Quebec red pine 1s. 3d. @ 1s. 8d. ; Quebec oak 1st quality 2s. 10d. @ 3s. 2d. per cubic foot ; 1st quality Quebec pine deals £21 @ £22 per standard ; spruce boards £6 5s. @ £6 15s.

CORDWOOD

is entirely without any change since our last report. Stocks ample for all requirements.

Long Maple	$7 50
Short "	7 00
Long Birch	7 00
Short "	6 50
Long Beech	6 50
Short "	6 00
Long Tamarack	6 50
Short "	5 00

TORONTO.

From Our Own Correspondent.

Feb. 21.—Trade stands much about the same here as when I last wrote you. Owing to the continued severe weather building is at a complete stand still. The wholesale dealers, however, make no complants ; dealers from Manitoba have turned up here in formidable numbers during the past week, all seemingly in the best of spirits and evidently manifesting strong faith in the future of their adopted home, and the quantity of lumber likely to find its way there from the Georgian Bay, during the coming summer, will form no inconsiderable portion of the total manufacture in that locality. It is true some of the dealers from that western province are a trifle shy of purchasing at present prices, believing that the opening of navigation will see a fall from present values. My own impression is that in this respect they will not find their expectations realized, and, indeed, they may have to pay higher prices on the first day of May than those at present demanded ; and in support of this view I would point to the extreme difficulty now being experienced both in the lumbering states of Michigan and Minnesota, as well as north of this place, owing to the great depth of snow ; many operators indeed have entirely suspended work in the woods ; the horses in numerous instances being entirely used up, so that it is doubtful if the total crop of logs, west of the Ottawa lumbering regions, will sum up as heavy as that of last season.

Lath still continues extremely scarce and to advance in price ; and shingles have a slightly downward tendency, although the latter are still quoted at the yards at figures formerly given you :

QUOTATIONS. FROM YARDS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	12 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	20 50
" " " 32 ft	22 00
" " " 34 ft	24 00
" " " 36 ft	25 50
" " " 38 ft	27 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	30 00
Three uppers, Am. inspection	35 00@40 00

B. M.

1¼-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	16 00
1 " " dressed	23 00
1 " " undressed	17 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ⅌ M	3 00
XX sawn shingles	2 00
Sawn Lath	2 50

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ⅌ M	$57 00@64 00
Pine, fourths	53 00@57 00
Pine, selects	48 00@52 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ⅌ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ⅌ M	40 00@43 00
Ash, second quality, ⅌ M	25 00@30 00
Cherry, good, ⅌ M	60 00@85 00
Cherry, common, ⅌ M	25 00@35 00
Oak, good, ⅌ M	40 00@43 00
Oak, second quality, ⅌ M	20 00@25 00
Basswood, ⅌ M	25 00@30 00
Hickory, ⅌ M	40 00@40 00
Maple, Canada, ⅌ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ⅌ M	35 00@40 00
Shingles, shaved, pine, ⅌ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ⅌ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

BOSTON.

Cotton, Wool and Iron of Feb. 24, says :—The weather continues to average unfavourablo for both inside and outside building operations, especially the latter. There is, however, more or less inquiry for moderate amounts of lumber for repairs, and for the most necessary operations now in progress. New business is rather backward and cautious, but there are prospects for the starting of a good average amount of fresh building enterprises as soon as the weather becomes spring-like and somewhat settled. Indeed, a number of new contracts are already offering or have been placed. John W. Leatherbee & Co. have been awarded the contract for spruce for the city of Boston the coming year at $15.75 per thousand. Among the other new contracts in the city are a school building for the Institute of Technology ; a business block for the Ames estate, on Washington street, corner of West ; a large building corner of Pearl street and Atlantic avenue, and a large structure started at Hamilton place.

In soft woods there is no particular change in values, and the demand is quiet and moderate, with quite full stock at the railroads. Southern pine shows a rather better and firmer tone. The furniture factories are starting up lively, which will improve the demand for hardwoods, which are moving steadily for desirable stock.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

The *Northwestern Lumberman* of Feb., 24, says :—The lumber business at large begins to give premonitory signs of the spring revival. Reports from the points of heavy supply in Michigan show that the buyers are beginning to feel around among stocks with a view to purchases. At Saginaw and Muskegon dealers begin to put in an appearance, and though transactions are not yet very numerous, the nature of the enquiries denote an intention to purchase at a not distant time. The number of the inquiries also indicate a heavy volume of trade when the season fairly opens. At Saginaw there is but slight disposition openly manifest to make concessions on anything but coarse stocks, yct little is known of the prices obtained, such transactions as have taken place being kept very quiet. At Muskegon as well as other manufacturing points in west Michigan, the holders of lumber seem to be indifferent to the general clamor about cheap lumber, and are generally holding stocks at last fall's prices. They meet enquiries with evasive answers, shrewdly concluding that questions put at this early period mean nothing more than a feeling around for information. The mill men over the lake appear to be simply holding their stocks for the spring demand, and do not mean to manifest any anxiety to sell before the demand fairly begins. It is likely, too, that considerable is hoped from the distributing trade movement that has been given a breeze at that point. The scheme at Manistee to combine in an agreement to limit the mill output, shows that the manufacturers intend to make a stand against the expected onslaught of the jobbers on prices. Other indications are at hand pointing to the same determination. Some jobbers in this city begin to doubt the future possibility of purchasing another stock very much cheaper than the one they now have on their foundations, and distrust the good policy of an over anxiety to sell what they have on hand at extremely weak prices. It is true that there is a disposition both in this city and on the Mississippi to scale down price-lists, some markets having taken that step already. The meeting that will be held by the trade in this city, February 27, will be one of great significance, for the tone then manifested in regard to prices will have a widespread effect. Though the Chicago price-list has fallen into disrepute under the influence of last year's defection in the ranks of the Exchange, and the cutting of prices that has prevailed, the markets of the Northwest still look to Chicago as the barometer of trade, for the reason that it is the heavier repository for lumber, and influences values throughout the country whatever may be the general opinion as to the integrity of the price-list. Throughout the Michigan producing region there is a present looking for indications, and in the meantime the holders of primary stocks are keeping quiet, with no disposition to force events. The wholesale trade in the Northwest is clearing its decks for the spring contest with values, and more or less concession to customers is the consequence of the jobbers desire to sell.

Trade is generally pickiug up in Illinois, Iowa and the west of the Missouri. In Ohio and Indiana it is somewhat hindered by the break in railroads, cansed by floods. In northern Wisconsin and Minnesota extreme winter weather still holds a firm grip, and trade is duller than in milder climes. At Winona, Minn., the price-list has been reduced 50 cents on common boards, from 50 cents to $1 on scantling, and from $1 to $3 on timber.

There is little change in the condition at the East. Trade is moderate at New York, while at Boston and New England points the indications are better, the demand having somewhat revived. A steady railroad demand at Albany is reported. Yellow pine at New York still maintains the slight improvement hitherto noted. The demand is increasing at Toledo, Ohio. There are enquiries at all markets, indicating a lively demand early in the spring.

The virtual settlement of the lumber tariff question by the refusal of the house of representatives to put lumber on the free list, has inspired manufacturers with more confidence than they felt when the matter was in doubt. They no feel that they have a basis for making a fight to maintain values, which no doubt has entered to their more recent determination to preserve a firm attitude.

Receipts, and stock on hand of lumber, shingles, etc., for the week ending Feb. 21, as reported by the Lumberman's Exchange :

RECEIPTS.

	Lumber.	*Shingles*
1883	1,396,000	2,524,000
1882	8,035,000	780,000

FROM JANUARY 1, 1883, TO FEBRUARY 21, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1883	17,587,000	11,723,000
1882	40,176,000	9,890,000
Inc.		1,833,000
Dec.	22,589,000	

STOCK ON HAND JAN. 1.

	1883.	1882.	1881.
Lumber	655,013,520	560,416,842	497,840,673
Shingles	299,946,350	260,906,494	188,722,000
Lath	76,361,002	48,820,438	50,321,185
Pickets	3,093,990	3,784,178	2,497,858
Cedar posts	78,034	219,012	63,659

OSWEGO. N. Y.

There are no changes from last quotations :—

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@15 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

GLASGOW.

The *Timber Trades Journal* of Feb. 10, says : The imports of wood to Clyde ports and also to Grangemouth from abroad during the past week have been extremely limited, consisting of parcels of staves and a few walnut and maple logs, etc. So far as the year has gone the additions to stocks have been few, the only full cargoes yet arrived consisting of teak timber, of which there were three cargoes imported last month. In the absence of pitch pine imports the consumption will speedily tell on the heavy stocks shown in the annual statement to be on hand. It is understood that not many vessels are offering for freights from Pensacola.

There are no public sales to report this week. At those that have been held since the beginning of the year—five in number—a disinclination to stock was shown by dealers, they having, it is said, a difficulty in obtaining a profit off consumers meantime, especially for the better descriptions of wood goods.

The market presently for birch, walnut, and mahogany is bare, and presents a favorable opportunity to importers.

LIVERPOOL.

The *Timber Trades Journal* of Feb. 10, says : There is apparently a little more life in our trade, although it is still in a languid condition : but as the imports of spruce deals and pitch pine, to which the supplies of this market are confined at this time of the year, are much below those usually made, there is every indication that prices, especially of the first-mentioned goods, will advance, seeing that the quantity held on importers' account is small, and that the engagement of tonnage so far is very limited. There is as yet no movement in pitch pine timber, and the majority of the merchants here appear to be disinclined to import until the present stock is materially reduced, notwithstanding the comparatively low prices that are being asked by the shippers.

There is more enquiry for oak cut into scantling suitable for wagon work, but without any material advance in price, and we may here remark that this descriptiou of goods holds a most anomalous position in the market, since prime selected wood cut to size is being sold at considerably less than the raw material. It is

difficult to see how this position of matters can continue in its present state, but for the present it would seem that buyers have the best of the market at the prices now going.

The only auction sale during the past week was Messrs. Farnworth & Jardine's sale of mahogany, &c., which took place on Friday, the result of which was not known until too late for publication in this issue.

TYNE.

The *Timber Trades Journal* of February 10, says :—The only arrivals of sawn goods to hand during the last seven days have been a parcel of staves from New York, and some small lots per Gothenburg steamers. With regard to the former, it is of interest to note the gradually extending importation of manufactured wood goods of every description from America ; not only doors, windows, &c., but staves ready to form into a barrel, and so packed that they can be immediately put together, are daily coming forward, and certain trades apparently have all they can do to hold their own in the race.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says :—The rate of consumption in Great Britain is fairly satisfactory, and if exporters will but practise a policy of abstention for a month or so, such patience will doubtless be rewarded. Sawing for the season has, it is true, commenced earlier than usual at many of the mills, but this fact is more than neutralized by the circumstance that the rivers up the country are nearly clean of logs. I have already drawn the attention of importers to the latter point, and the danger it may involve if importers' stocks of Swedish goods are allowed to run low.

The letter which you published in your last issue from Quebec is very reassuring to all those interested in north of Europe whitewood, and holds out a legitimate hope that we may expect before long to see prices of these goods approximate more nearly to those of Swedish redwood. In the controversy which has been going on for some time in your columns, those interested in the spruce trade on the west coast of England seem to me to have given too little heed to the fact that a silent but effective natural law has been more responsible than the system of credit in causing the unsatisfactory result complained of. Importers in Liverpool have paid too much for their goods under pressure of a heavy demand from the home American markets, as compared to what they have been able to obtain in the inland markets of England in competition with Baltic goods. The great increase of population and wealth, taking and likely to take place in the United States and Canada, will, in my opinion, cause the spruce trade and the trade in other cheap woods from these countries to the west coast of England to diminish in volume. The east coast ports, notably Hull and Grimby, will probably not fail to benefit by what Liverpool loses in this respect.

Kippewa.

FEB. 13.—It is probable that the cut of timber and saw logs on the Kippewa will be somewhat larger this winter than last.

The number of shanties owned by the various lumbermen is as follows: Sherman, Lord & Hurdman, 2 ; Bryson Bros., 1 ; Edwards & Co., 2 ; Perley & Pattee, 2 ; Booth & Gordon, 2 ; Gilmour, 4 ; Latour, including jobbers, 5 ; David Moore, including jobbers, 4 ; A. Grant, 8 ; giving a total of 30. In addition to these Mr. Grant has about 7 or 8 more on his upper limits, but all this timber will be taken down by Temiscamingue. I only consider as Kippewa shanties, those in which timber or logs are made actually on the Kippewa itself or its tributaries.

The thermometer went down to forty below zero last Saturday, the 12th Feb.

Reciprocity.

A Canadian correspondent of the *Northwestern Lumberman* says :—There is scarcely any doubt but that the removal of the American duty (it being the first inflicted, therefore it should be the first removed) would lead also to the removal of all obstructions to the free entry of American lumber to Canadian markets. My case is summed up thus : It would be a thousand times better for the American manufacturers to agree to the termination of this duty on the condition that the Canadian government should also repeal the duty on American-made lumber. This would give to them an immense market in the western Canadian provinces, and, according to their own statements, they would bo as able to hold their own in the old markets as they ever have been.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Jan., and for the first month of the year :—

MONTH ENDED 31ST JAN., 1883.

Timber (Hewn).	*Quantity. Loads.*	*Value. £.*
Russia	566	691
Sweden and Norway	15,872	25,056
Germany	3,218	13,309
United States	2,542	10,829
British India	3,322	45,268
British North America	3,570	16,692
Other Countries	34,850	42,202
Total	63,940	154,047
Timber (Sawn or Split, Planed or Dressed).		
ussia	4,767	12,105
Sweden and Norway	24,041	60,633
British North America	27,058	63,355
Other Countries	5,489	22,073
Total	61,355	158,166
Staves, (all sizes)	2,315	15,876
Mahogany (tons)	1,683	17,638
Total of Hewn and Sawn	125,295	312,213

Gleaning Pine.

A local newspaper says that two farmers within two and a half miles of Ludington, Mich., have hauled to mill this winter 100,000 feet of pine, all secured from land that had been cut over before—that is, the big operators had skimmed the cream from it, and thought that what was left was of no account. But the two farmers, probably in clearing the land, picked up a little matter of 100,000 feet, which they sold for $7.50 a thousand, or an aggregate of $750. Probably after the great operators have "exhausted" the pine in Michigan, the farmers, small jobbers and pocket mill men will make themselves rich gleaning up the scattered pine, and furnishing the local supply for years to come. —*Northwestern Lumberman.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle,

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy ; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

CONSUMPTION
POSITIVELY CURED.

All sufferers from this disease that are anxious to be cured should try **Dr. Kissner's Celebrated Consumption Powders.** These powders are the only preparation known that will cure consumption and all diseases of the **Throat and Lungs**—indeed, so strong is our faith in them, and also to convince you that they are no humhug, we will forward to every sufferer, by mail, post paid, **a Free Trial Box.**

We don't want your money until you are perfectly satisfied of their curative powers. If your life is worth saving, don't delay in giving these **Powders** a trial, as they will surely cure you.

Price for large box $3.00, sent to any part of the United States or Canada, by mail, on receipt of price. Address

ASH & ROBBINS,
20L24 **360 Fulton Street, Brooklyn, N. Y.**

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O. ; W. EDGAR, Kilroy, P.O. ; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,
ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills
L7tf

JONES & SON,
Wholesale Lumber & Timber Dealers
39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.
L7

AMERICAN HEAVY
Oak Tanned Leather Belting

Rubber Belting, | Rubber Packing,
Rubber Hose, | Linen Hose,
And Cotton Hose.

A Full and Complete Stock always on hand.
Write for Prices and Discounts.

T. McILROY, JR.
WAREHOUSE—10 & 12 King Street East,
P.O. BOX 556. TORONTO.
L5

HOW TO FIRE STEAM BOILERS.

Young engineers, if not some more experienced ones, will find some useful hints on a very important subject in the following article from the *Milling World*:

"By the application of a little skill and care, very unusal results may not unfrequently be attained by ingenious mechanics. This is especially the case with firing steam generators when the fuel used is salt or saw mill offal. Careless firemen fill the coal haphazard, as long as any can be got into the fire box, causing great volumes of dense, black, unconsumed smoke to issue from the stack, giving evidence to all who see it, and know anything about what is going on, that a large percentage of the fuel is being thrown broadcast into the air, not only wasting the money of the owner, and the labor of the fireman, but contaminating the atmosphere for the use and and enjoyment of the public.

Nothing would seem to be to be more plain than that it is the duty of the fireman, for his own sake, if not for that of his employers, to use as little fuel and labor as possible, to do his duty a little better than any one else. To effect this, only a little care, combined with such knowledge and skill as may easily be acquired by any fireman, is necessary. In burning coal, the grates should be much nearer the bottom of the boilers than in burning saw mill offal, the fire should be much more spread out, and kept shallower, and in feeding coal the lumps should be broken up to hickory nut size, and only a small quantity thrown on at once and well spread on, so that the flames may attack it on every side and thoroughly consume all the carbon and bitumen of which ordinary coal is composed. It is of vital importance that all the air needed to thoroughly burn the fuel up should be applied under the grate as directly as possible, and as hot as it can be made. Not a little of the waste in fuel is caused by too much air passing through the furnace in various ways, all of which consume heat in unnecessary quantity. The furnace walls should be as near airtight as possible, and no useless air should be allowed access except through the proper spaces, otherwise the draught is injured and much of the fuel is wasted.

The back ends of the grate bars ought to be several inches lower than the front, that the air going up to consume the fuel may not meet with so short a curve. It is also best, in many cases, to leave the ashes banked up in the back of the ash pit and at the sides, that the air currents may be concentrated into a steady stream, carefully avoiding all eddies. The best method for each separate furnace can only be ascertained by trial and experimental tests, which the fireman must make for himself, and which he will be sure to do if he wishes to excel in his business.

A fire room should always be kept closed up tight, be kept as hot as possible, and free from cold air currents and blasts. It is very poor economy to spend labor and fuel to make steam only to condense and lose it before it is used. The boilers ought to be completely covered with an air and heat tight casing. Formerly it was supposed that the boiler would be injured if the flames had access to the steam space in the upper part above the water, but this long ago been proved to be a great mistake. Where the boilers are fired inside, mineral wool covered over the exterior flagged with wood or metal is excellent as long as it is kept dry. A boiler thus covered can be touched by the hand without any unusual or uncomfortable heat being experienced. Even in warm climates, boilers ought always to be well protected under weather proof sheds or buildings covering up perfectly tight all the rear parts, even using a bulkhead or partition just at the front, outside of which the fireman may stand if the heat is too much for him. It must stand to reason that a boiler room cannot be made too hot, or kept so, for economy and efficiency. How to do so cheapest and easiest, is the problem which both employer and operator should unite in striving to attain.

Not long ago the writer saw a portable saw at a fair, that burned only 2¼ lb. of coal per horse power an hour. The coal was broken up chestnut size, screened and washed, and fed into the furnace a pound at a time, being carefully spread over the bed of glowing fuel in the fire box. No smoke could be seen issing from the stack, and the object, that of entirely consuming the fuel, seemed to be attained. But this is not practicable in ordinary use, though it may be approximated more nearly than it is, in almost every case.

The use of steam in very minute jets in front of the fire box inside may be made to contribute largely toward heating up furnaces and consuming smoke, when intelligently and skillfully used. But when applied in excess it dampens down a fire and does much more harm than good.

Water, it is well known, is composed of two highly combustible gases, oxygen and hydrogen. When steam is injected into a very hot fire, the water of which it is composed is decomposed, or separated into these gases, which add greatly to the heat of the furnace.

These suggestions are made largely for the attention of firemen and engineers, who can readily see what a margin for improvement is before them."—*Scientific American.*

AID OF MACHINERY TO LABOR.

Labor is a natural burden upon humanity; yet it is the key which unlocks the storehouse of wealth, convenience and luxury. By the use of invented and applied machinery muscular work is greatly relieved, and results cheaply and extensively obtained. In all this, however, intelligent skill is not supplanted; but rather there is a wider field created for the same, and more and more does it come into demand as the facilities for production multiply. Man, of course, may exist as our forefathers did, living in a rude and limited way on the necessaries of life, and even these secured only at the expense of oppressive toil; but as improvements are made, and varied and enlarged benefits flow therefrom, he rises in the scale of being, and the sphere of life is extended. The easy supply of wants in any direction only begets efforts in others; and as matters thus progress, instead of the demand for useful industry being diminished, there is more and more inducement to laborers to employ themselves with the exercise of every faculty.

It is a mistaken view, therefore, to imagine that there is the least tendency in the use of machinery to supersede the necessity of workmen, and take from them all opportunity to labor. Their skilful hands, discerning eyes, and intelligent brains are surely destined to find an ever widening field. Of course, the worker must not remain stationary, content to live and die an antiquated fossil, while all the world about him is changing and progressing. What he once did painfully and slowly with the hands alone he must now more abundantly accomplish through the agency of labor-saving devices and tools. Society has need of more production, and will only be satisfied with still more and more. With its prosperity and progress the laborer shares; and to-day he has more of the comforts and luxuries of life than were enjoyed by kings a hundred years ago. The prejudice against improvement, and the jealousy against capital and associations in their efforts to manage and direct production into more efficient and beneficial channels should disappear. As changes occur, old ruts should be promptly abandoned. By adapting himself to circumstances as they are thrust upon him, there is not a man who cannot succeed and find a market for his labor far beyond his ability to supply.—*Dubuque Trade Journal.*

THE U. S. MARKETS.

Saginaw, in one seuse, is the key to the lumber business in the country at large. It occupies a position midway between the prairie interior and the seaboard, and was from an early period the centre of the most important pine-producing region in the country. Though West Michigan, and its great market, Chicago, have of late years exceeded the Saginaw valley in producing and distributing capacity, the complexion of affairs at Saginaw points must still be counted on as paramountly significant of the true condition in the country at large, East and West, because of its relation to all the trade south and east, and to a certain extent to the westward. Hence it is, that when the report from Saginaw comes, as it does this week, that never since the panicky times of 1873 was there so little inquiry for lumber as now, it must be taken as a very important statement bearing on the present condition of the lumber trade. It shows conclusively that at the present time lumber merchants in all the territory tributary to the Saginaw sources of supply have all, or nearly all, the lumber they want. The reason of this apathy about further purchases is not hard to reach—an overstock all along the line, and an uncertainty concerning the future both in respect to the volume of next season's demand and the value of lumber.

When we seek corroborative evidence bearing on the same point from other sources outside of Saginaw, there is a striking unanimity. Wholesale dealers in this market have neglected the questiou of future supply all winter, their anxiety to sell what they have on hand overbearing all other considerations. At Albany, Buffalo, and minor eastern points, the same quietude is observable, and Mississippi markets are dormant. Undoubtedly the exceptionally severe winter and the snow blockades have intensified the sluggish condition, but that does not really put a better face on the matter, nor inspire any hope for the immediate future. Though there is an excessive stock being carried over this winter, if the cold season had been more favorable to building operations and the movement of lumber, a larger volume would have gone into consumption, and the stocks been more reduced than will now be the case. In all the large cities the excessive and long-continued inclement weather has nearly stopped building, and has thus very seriously reduced the yard trade.

This adverse condition, added to an overstock, has put the lumber trade into even a worse shape than the most hopeless individual feared early in the winter. The possibility of it was foreshadowed by the *Lumberman*, though the brighter view was also presented of the opposite extreme. But the seasons carry with them their effects in spite of hope or fear.

There are few lumberman sanguine enough at the present time to predict that prices in 1883 will equal those of 1882. It is now settled beyond a doubt that they will be scaled lower, but how much it remains for the opening spring to determine. As a matter of fact, values now are considerably below those prevailing last year at this time, when there was a veritable boom in demand, and prices were tending upward. The question now is as to whether they will fall materially lower, and how much, and as to where they will stop, and when become settled. In respect to these very serious matters to the trade every body at present is at sea.

Bearing on the general situation are the probabilities of the log crop and the early or late starting of the mills in the spring. The deep snows are seriously interfering with work in the woods, and it now seems likely that the output will not be as large as was first intended. This may prevent an overabundaut supply, as earlier in the season seemed probable. Besides, there is a prospect of a late opening of the streams, and a consequent late coming down of the logs and starting up of the mills. Navigation may also open late. If these maybes all become realities they will defer the opening of the re-supply season, so that if the demand for stock to go into consumption should be active as soon as the building season begins, the condition of oversupply may be somewhat modified. The *Lumberman* is not now making such a prediction, but only indicating what borders on the probability. In the present locked-up state of affairs this is about all that can be done.—*Northwestern Lumberman.*

Joinery for England.

The London *Timber Trades Journal* says:—With regard to the joinery trade, the business seems to be divided between the work done at home and the importations from Sweden and America, which goes on, side by side with fluctuations, America having apparently the biggest share.

Referring to a circular before us issued by a large American branch firm on this side, we observe that there has been a falling-off in the imports of ready-made doors, both from the United States and Sweden, to an extent that is corroborative of the dull trade of the past year, and to which we made special allusion in reviewing the importations of 1882 in last week's issue.

Dye from Poplar.

The young growth of the poplar tree yields a dye which may be extracted as follows: The young twigs and branches are bruised and boiled for twenty minutes with a solution of alum (ten pounds of wood requiring one pound of alum), in three gallons of water. The solution is filtered hot and allowed to cool, and after standing some time is again filtered from a resinous deposit. On exposure to air and light it develops a rich gold color, and may be used directly for dyeing orange and yellow shades upon all classes of goods.—*Buffalo Lumber World.*

A Soap Producing Tree.

In the temperate region of Southern Chili, of which it is a native, grows a tree which promises to be an acquisition to any country where it can be acclimated. It is called the quillai tree, and belongs to the botanical family Rosacea. It grows to a large size in the ravines of the spurs of the Andes and the coast range of hills. Its value is in its bark, which contains an alkali of extraordinary saponaceous virtue, and for washing and cleansing wool or silk has no equal as a detergent which thoroughly cleanses without injury.

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestable food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

WORTH KNOWING.—A Fact Worth Knowing. The best household remedy known for Coughs, Colds, Bronchitis, Asthma, Whooping Cough and all throat and chest troubles tending toward Pulmonary Consumption is Hagyard's Pectoral Balsam, to be procured of any druggist.

GOOD ADVICE.—If our readers will accept proffered advice, they will always keep a bottle of Hagyard's Yellow Oil at hand for use in emergencies, such as Burns, Scalds, Wounds, Lameness, Croup, Chilblains, Rheumatism and all varieties of aches, pains and inflammations. It will ever be found reliable.

MR. THOMAS W. RACE, Editor and Proprietor of the Mitchell *Recorder*, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Billiousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery, decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Proprietors, Toronto, Ont.

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Sick Headache and Biliousness.

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These Wheels are Wire Strengthened

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Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

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Messrs. R. H. SMITH & CO., ST. CATHERINES.

JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ., PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

1L1

Chips.

A NEW YORK firm recently purchased fifty thousand feet of bird's eye maple timber in one of the northern Michigan counties.

THE *Northwestern Lumberman* says that nearly 200,000 hop-poles have crossed the St. Lawrence from Brockville to Norristown, N. Y., this winter.

THE Emerson *International* says that about 2,500,000 feet of timber will be floated down the Red River the coming season by Mr. McKay, of Morris, who has quite a force at work at his camp in Minnesota.

S. L. LANDERS, of Mt. Carmel, Ill., has made provision for his wife and children by planting 100,000 walnuts, which he expects will produce trees 15 inches in diameter in 20 years, and yield an independent fortune.

SMOKE will soon be at a premium. From 2,800,000 cubic feet of smoke given out by say 1,000 cords of wood, it is said that 12,000 pounds of acetate of lime, 200 gallons of alcohol, and 25 pounds of tar may be obtained,

PHILIP RITZ is fencing a 7,000-acre wheat field near Ritzville, W. T, There will be 12 miles of fence in all, requiring 50 car-loads of poles and cedar posts, which are being got out in the timber region of Pen d'Orielle lake.

AN Ottawa correspondent says that advices from the lumbering districts state that the winter has been a very favourable one for lumbering operations. Throughout the winter the snow always fell just in time to prevent the shanty roads getting worn.

THERE is some excitement among the Indians on Walpole Island, the report having been circulated that a recent timber sale was consummated by means of bribery. There were two bidders for the timber, and both claimed that the other party resorted to unlawful acts. Indian Agent Watson is investigating the affair.

THERE comes a muttered threatening of danger to the peace of Oka from Seminary sources. It appears that the Okas are cutting wood on the lands sold by the Sominary to the settlers, also that the Okas are in a starving condition, and that their temper is rising. Friends of the Okas say they have not heard of the threatened trouble.

THE Western Union Telegraph Company has estimated the durance of telegraph poles as follows:—Cedar, 16 years; chestnut, 13: juniper, 13; spruce 7 years. Cedar, chestnut, and spruce are used in the Northern States; juniper and cypress in the Southern States, and red wood in California. Poles cut in the summer will not last as long as those cut in the winter by five years. Soil and climate, of course, making a difference with the life of poles.

THE *Lumberman's Gazette* of Bay City, Michigan, says:—Senatorial action in refusing to place lumber on the free list will undoubtedly be instrumental in restoring confidence, settling values, and again opening up the avenues of business between the lumber manufacturing centres and the great eastern and western distributing points. Capitalists and laborers alike have reason to thank the Senate for this timely expression of interest in the manufacturing industries of the country.

IT is understood, says the Manistee, Mich., *Democrat*, that several large lumber dealers and capitalists from the East are making effort to purchase all of the uncut pine on the Ontonagon Grant, now owned by Milwaukee capitalists. The negotiating parties are the incorporators of the American Lumber Company, who have already purchased from the Detroit, Mackinac and Marquette Railroad Company the standing pine on its entire land grant, except, Mackinac county and the east part of Chippewa county.

THE making of charcoal is a considerable industry in Michigan along the line of the Flint & Pere Marquette railroad. Kilns are built of brick that will hold 40 cords of wood, and are filled twice a month. The product is shipped to Wyandotte, Detriot, Munro and Cleveland. Twenty pounds constitutes a bushel of charcoal, and a cord of wood will produce 40 bushels. Between Munro and Wayne there are 43 kilns; five at Stony Run, two at Otter lake and eight at Sears. The cost of the wood ranges from $1.30 to $1.75 per cord.

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FIRING WITH SAWDUST.

An engineer inquires about the prevention of smoke in using light fuels, sawdust, shaving, etc. If he has a return flue or tubular boiler, let him try a five or six inch pipe, one side drilled with ¼-inch holes, one inch apart, the pipe long enough to reach through the side walls and be flush with the same on either end; put this in just back of the bridge wall, say one foot, and some four or six inches below it, the holes on top. This arrangement will increase the flame and heat, and decrease the smoke. With a knowledge of the size of grate and velocity of draft, the size of the pipe could be got nearly correct. It is best to have it large enough, and if too large it can be partially closed. If a sectional boiler, have the walls of the furnace built double, with a space of four inches as long as the furnace, and as high as the bottom of the boiler. Connect this space with perforated plates. Be careful not to put them in directly opposite, as the object sought is to get a thorough mixture of the flame and air. If the air enters directly opposite, the tendency is to produce a straight flame, while if the air of one side enters back or forward of the opening on the opposite side, eddies are produced, and a more thorough mixing of the air and flame. An opening to the space should also be left from the outside. If a blower is handy, it would be a good idea to connect the air space with that and thus get greater velocity; but if a blower *is* used, a less number of holes should be used than with natural draft. The air space should be built so it could be cleaned, as one fault of the various patent settings is the stopping of air flues, and no way to clean them; or the cracking of the same and leaving an opening for air where it is not wanted. I know of a case where a party was getting wonderful results from a popular setting, with screenings and bituminous coal or fuel, but a boiler maker being called in to do some repairs on the boiler, the air flues were found to be entirely closed, and no way of cleaning them but to tear the whole arrangement down and build over again.—*Cotton, Wool and Iron.*

The U. S. Tariff.

The *Northwestern Lumberman* says:—Since it has become evident that the pending tariff bill will not place lumber on the free list, manufacturers breathe easier. After the Senate, in committee of the whole, adopted an amendment looking to the removal of duties on rough lumber, the manufacturers felt decidedly out of mental health. They took in the entire situation—big stocks on hand, a heavy log crop, a large number of new mills, and duty-free Canada lumber. The outlook was really gloomy. But now that the squall has blown over, the manufacturers do not disguise their elation. They are now planning the next season's campaign against the bearish jobbers in good earnest. The *Lumberman* is not surprised at the outcome. It all along was of the opinion that the least danger the manufacturers had to fear was from a deluge of free Canada lumber.

MONTREAL NOTES.

The *Gazette* says:—There is still a good enquiry for the leading descriptions of hardwood for the American market, but holders are not anxious sellers, and prices keep very firm. A fair local demand is likewise experienced for both hard and soft woods at last week's prices. Advices from Ottawa state that the prospects for the output of lumber are good, and that an unprecedentedly large crop of logs will be got out. Mr. J. Poupore, Crown timber agent, Ottawa, has issued a statement of revenue accrued in 1882 classified to revenue as now divided to Quebec, Ontario and the Dominion. It is as follows:—

	Quebec.	*Ontario.*	*Dominion*
Saw logs.....	$ 327,378 26	$189,769 54	None
Ground Rents	41,973 95	14,587 12	None
Booms	16,208 00	3,400 00	None
From Indian land's ground rents.....	.....	.....	$ 6,109
Timber dues..	116,208 00	3,400 00	None
Timber dues..	.....	.....	79,349
Slides and boom dues.	.....	.....	83,000 44
T'l Quebec.....			$ 363,315 30
T'l Ontario.....			2,043,380 76
T'l Dominion.....			83,854 93

U. S. Census Returns.

Western lumber papers insist that the census estimates of the amount of standing pine in the northwest are anything but correct, and poohpooh the idea that there is only a few years' supply on hand. Nevertheless, papers published in the heart of the lumber districts of Michigan daily report that certain specified mills and sections of the country have only from ten to twelve years supply. Mr. R. D. Mallet, of Luddington, Mich., was in the city during the carnival, after a trip through Mississippi. He reports that in the country contributing to Luddiugton, there is ouly enough standing pine for teu years cut at the present rate of production. Mr. Mallet is a large operator, and has travelled extensively through the forest regions of this country, and after careful examination, he has come to the conclusion that, so far as the Northwest is concerued, the census returns may be accepted as correct.—*American Lumberman.*

Prevention of Forest Fires.

QUEBEC, Feb. 24.—The following is Mr. Lynch's resolution respecting the means to be adopted for the more effectual preveution of forest fires:—"Resolved that it shall be lawful for the Commissioner of Crown Lands to employ between the 1st of April and the 1st of November, in any year, for the more effectual prevention of forest fires, such a number of men as he may deem necessary for that end, and he may, for any portion of the Province of Quebec, appoint an officer for that purpose who shall be kuown and designated as fire superintendent."

Hemlock Bark.

In the House of Commons on Monday, Feb. 26, in reply to Mr. Bergeron, Sir Leonard Tilley said the Government had under consideration a proposal to bring forward during the present session some measure regarding hemlock bark, in view of the fact that the United States House of Representatives had recently adopted a bill imposing a duty of 20 per cent. on the bark.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. w46d12t22

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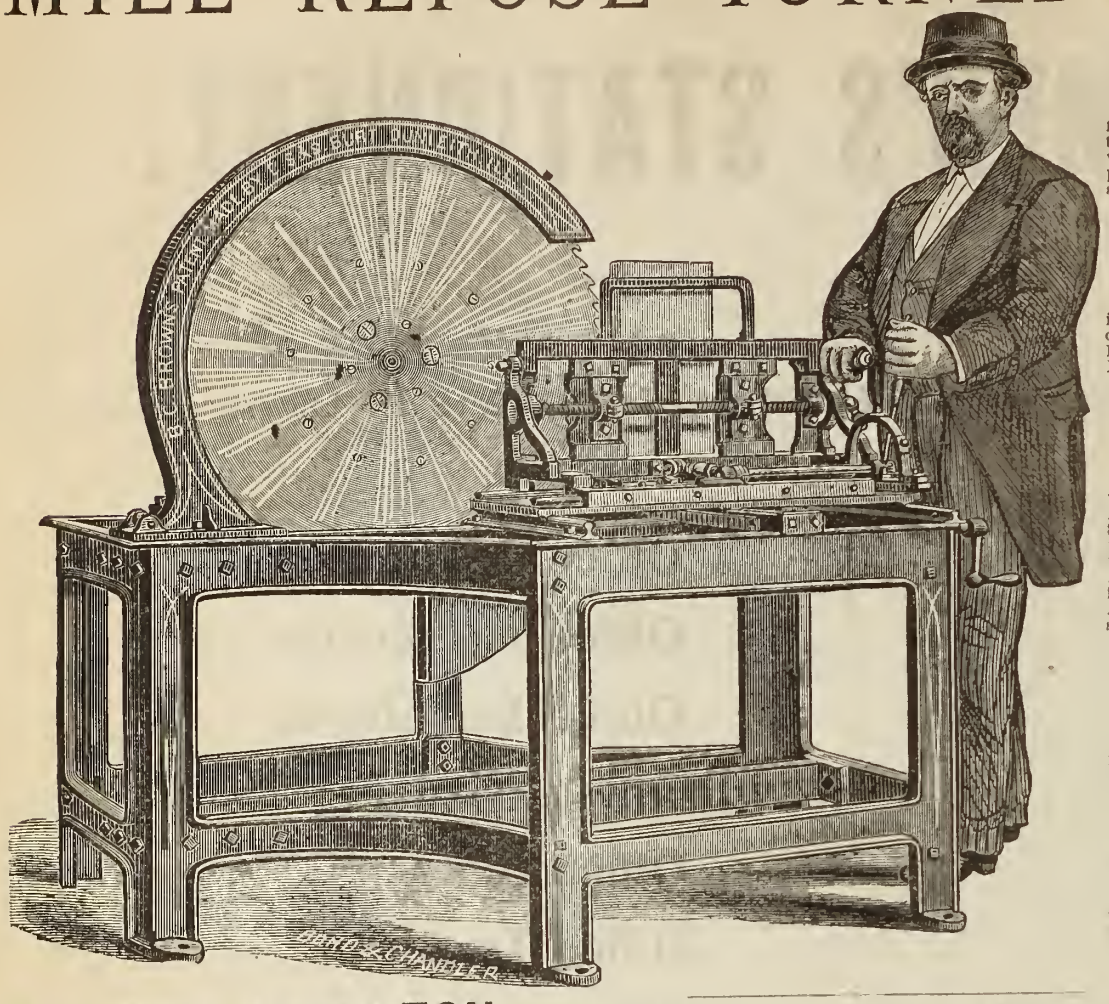

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Brown's Patent Spalt and Shingle Mill,

for making Shingles, Barrel Heading, Box Stuff, &c., from spalls, board trimmings, slabs, and mill waste generally, turning material otherwise worthless into valuable products. I have made arrangements with the patentee to manufacture and sell for the Dominion; have made and sold a good number of these machines which are giving excellent satisfaction and can give the best of references.

Our Steam Feed for Circular Mills,

is now the Best Feed where Steam is the motive power. It is easily operated, is simple, rapid, and seems never likely to wear out; sixteen 16 ft. boards, or eighteen 12 ft. boards, have been cut by it in one minute. It is the established feed for steam mills; I make a specialty of its manufacture; will guarantee satisfaction.

Our Patent Twin or Span Circular,

with Steam Feed for Steam Mills, and Rope or Rack Feed for Water Mills is fast coming into general estimation and is used in place of Gang Slabber in our best Canadian Mills. One of our Span Circulars which will slab logs 25 inches in diameter down to 7 and 8 inch stocks, will do the work of three slabbers, with an immense reduction in first cost, running expenses and labour. Two of these machines can be seen at work in Messrs. Gilmour & Co's Mill, Trenton, and Georgian Bay Lumber Co's Mill, Waubaushene and Port Severn. ☞I am also introducing a new style of Mill Engine, neat, substantial and simple, with Corliss Frame and Balanced Valve, all carefully designed and honestly made.

Covel's Automatic Saw Sharpener,

is now well-known and highly appreciated, when placed at work in the mill it sings out its own praise; I keep it constantly on hand, ready for immediate shipment.

Our Standard Circular & Gang Mills & Machinery,

are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a specialty, any party wanting a First-class Mill will find it to their advantage to give me a call.

WILLIAM HAMILTON, Peterborough Foundry and Machine Works, **PETERBOROUGH Ont.**

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To take our sole Agency for the Provinces of ONTARIO and QUEBEC. By this means consumers who want only single wheels, or goods in small quantity, can supply themselves easily and avoid the trouble of special importations, while dealers can secure the most liberal terms, fully equal to those they could obtain by buying of us direct.

Messrs. Frothingham & Workman will carry a full stock of TANITE EMERY WHEELS, and a sample line of Machines, and can fill all orders promptly.

The Tanite Company, Stroudsburg, Monroe Co. Pa.

September 28th, 1882. 1yL1S

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS' AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 3. PETERBOROUGH, ONT., MARCH 15, 1883. NO. 6.

A QUEBEC despatch says that Mr. P. Ouellet, of Levis, has purchased from the Bank of Montreal more than a million feet of timber belonging to the estate of the late Leandre Mohot, of Cap St. Ignace.

MR. VACHON has purchased all the lumber on the seignory owned by the Seminary of Quebec. Over one hundred men are engaged in cutting timber and building a dam on the Montmorenci river about half a mile above the natural steps.

INDIAN Superintendent Dingman has been making inquiries into the sale of timber on Walpole Island. One chief declares that he received $250 in cash and a promise of ten trees to snpport Mr. Tennant's contract, and a further sum of $100 to make an affidavit that the tenders were voted on honestly.

TIMBER, such as hickory, dogwood and persimmon, which a short time ago was almost worthless in North Carolina, is now in demand at $6 per cord, for sawing into blocks for the purpose of manufacturing them into power-loom shuttles. A factory for doing this has been started in Statesville, N. C., another at Elmwood, on the Western North Carolina Railroad, and still another at the Iredell Mills.

COTTONWOOD, like hemlock, a few years ago was regarded as almost worthless. It was principally used by raftsmen for buoying up cyprus logs, and found little or no market. Now it has come into extensive use in New Orleans and other southern cities, for the manufacture of packing boxes and is claimed to be the best wood in the world for that purpose. The milling price for seasoned lumber is $13 per thousand with prospect of an advance as the supply readily obtainable decreases. The *American Lumberman* thinks it highly probable that this wood will ultimately come into favor for ceiling and other inside work, as experiments in that line have proved very satisfactory.

A BILL has been introduced into Congress directing the withdrawal from the market of the fine government timber lands yet undisposed of, which are principally valuable for their timber, and the appointment of a sufficient number of examiners skilled in woodcraft to make an examination of the pine lands already surveyed, and report a full description of them, giving the quality of the soil, the springs and streams of water, the quality and quantity of pine and other matters tending to fix the value of the land. After the filing of the reports with the Secretary of the Interior, he is authorized to offer the lands for sale in the manner now prescribed by law, but the notice of sale shall contain a description by legal subdivisions, and the quality and merchantable value of the lands.

TO GROW FOREST TREES FROM SEED.

The following paper was read at the meeting of the American Forestry Congress at Montreal, by D. W. Beadle, of St. Catharines, Ont.:

It has occurred to me that there may be farmers who want to plant young trees, either for useful purposes or for ornamentation, and if they want to plant largely may find it impossible to get them in sufficient quantity from nurserymen, who generally confine their cultivation to fruit trees, and have not grown to any great extent forest trees for timber. But these parties can form a nursery of these trees themselves by procuring a small piece of ground and have it especially prepared and well manured, so that there will be strength in the soil for a few years, and then they can raise whatever kind of tree they want. Seeds of the elm, maple, ash and of the walnut and butternut can be found in almost any part of the Province. Thr important point in planting seeds is that they should be planted as soon as perfectly ripe. Some of our trees ripen their seeds quite early. The soft maples, the dasycarpum and rubrum and the elms, ripen their seeds in June. (Mr. Beadle here exhibited two seedlings of soft maple grown from this year's seeds.) These maples ripen their seed in June, and it should be gathered and sown at once so that you can get a tree of considerable growth before the winter season. The seed of the elms should also be sown at once; it should be sown in drills not deeply, but covered very lighly. These small seeds require to be covered with only sufficient earth to keep them moist, and they will produce plants in a very short time, and gain sufficient strength to tide over the cold season. But it is not true of all the maples that they ripen their seed so early in the season. The sugar maple ripens its seeds late in the autumn, as well as the ash-leaved maple, and unless you wish to sow them in the autumn, you have to preserve them and sow them in the spring. If you are not in a position to sow the seed at once, and wish to keep them till the next spring, they should be mixed with sandy soil and kept damp, yet not so damp as to cause them to germinate, and not be allowed to get dry. In this way you may preserve them with safty. If kept dry in papers some of them will have vitality the following spring, but many of them will not germinate next season, and the proper way to preserve them is to mix them with moist earth. Now come the butternuts, chestnuts, and walnuts; these all ripen in the late autumn, and in suitable soils may be planted as soon as gathered, and allowed to freeze and thaw with impunity, as they will not suffer therefrom, but will germinate freely in the spring. But in soils which heave out the nuts under the effect of alternate freezing and thawing, it will be better to mix the seeds with soil in sufficient quantity to keep them moist, and prevent them from moulding, and keep them until spring before planting, or they may be spread out very thin upon the ground, and covered with a sod, in which manner they will keep fresh. It is not necessary that the nuts be subjected to frost, that is a matter of perfect indifference; the important thing is not to permit them to become dry. These trees can be grown in nursery fashion, until they attain sufficient size to be planted where they are to remain, especially the elms, maples and ashes. The nut-bearing trees will make better growth if they be planted in the nut where they are to remain.

FAR WESTERN PROGRESS.

One of the most noteworthy examples of current progress is the opening up of Idaho, Montana, Oregon and Washington by railway construction. The remote regions of the Rocky mountains in Idaho and Montana, as well as eastern Oregon and Washington, hitherto inaccesssible save by means of the slow-plodding mule and the long-suffering horse, will soon reverberate with the shrill locomotive whistle and the thundering train. The vast regions thus opening to traffic are mostly without adequate timber resources, and as their mining and stock-grazing interests are developed, and towns and cities spring up, a field of lumber distribution as large as that now tributary to Chicago will be added to that which is calling on the supply.

All are familiar with the building of the Northern Pacific, which now lacks only 200 miles of completion, and will sweep across the northern part of the mountain region. The Union Pacific company is pulling out to reach Oregon and Washington aoreast of its great northern rival. It is constructing the Oregon Short Line, which leaves the main line at Granger, Wyoming, and strikes off through Idaho in a generally northwest direction toward Oregon, and is intended to connect with the Oregon system at, or fifty miles east of, Baker City. The road will be opened to Shoshoue, Idaho, on March 1, a distance of 321 miles from Granger. Shoshone is at the junction of the Wood river branch, which extends northward. The Short Line not only will connect with the Oregon system, but is striviug after Puget Sound business and this interest is spurring the Northern Pacific company to put in the projected road across the Cascade range from its trunk line to a Puget Sound outlet. Not only are these two great rival trans-coutinental companies thus reaching and straining after north Pacific traffic, but it is said that the Chicago & Northwestern company is stretching for the Pacific through a region midway between the lines of the Union Pacific and Northern Pacific, and will soon have a road completed to Deadwood, in the Black Hills. Further progress westward across the Rockies is only a question of time. These three great trunk lines will quite thoroughly open up the regions of Idaho and Montana, and each is sure to throw out branches as the two that have already penetrated the country have begun to do. It is safe to say that, within three to five years, Idaho, Montana, eastern Oregon and Washington will be as well supplied with railroads as Iowa and Minnesota now are. This, of course, means settlement, hundreds of new towns and cities, and the use of any amount of lumber.

The territory in question will derive a large part of its lumber supplies from the growths in the mountains of Montana around Lake Pend D'Oreille, the western slope of the Rockies, and on Puget Sound; but these sources of supply will not be nearly adequate to supply the demand. The white pine of the regions of the great lakes will furnish a kind of lumber that will be wanted in the mountain states and territories, and the supply will be drawn upon as long as it shall last.—*Northwestern Lumberman.*

THE NORTHWESTERN TRADE.

We learn from the *Northwestern Lumberman's* report of the proceedings at the monthly meeting of the Chicago Lumbermen's Exchange that the president called upon Major Camp, of Camp & Walker, Minneapolis, Minn., to address the meeting. After a few complimentary remarks, by way of sugar-coating a bitter pill he was rolling up for them, he launched the opinion that the prospects were that trade in the northwest would not be as good as it was last year. They should cut the same amount of logs that was cut last year, but they went in for more. Providence had kindly stepped in and saved them from the foolishness they had intended (meaning the intervention of deep snow and extremely cold weather). The demand in Dakota and Manitoba will not be as great as it was a year ago, and the prospect was a little discouraging. Yet they were working along and maintaining prices. He could say for the firm of Camp & Walker that it had not sold a foot of lumber yet below list prices. When they should find that their prices were above the market, they would reduce their figures and issue a new list. The trade of Chicago and the Minneapolis district the coming year would have to meet a heavy competition. There would be a heavy increase of production in northern Wisconsin, fully 200,000,000 feet, on account of uumerous new mills having been put in. Chicago will uot get a chance to ship to Manitoba, as it did last year, because he (Camp) would prevent it if possible. The dealers of his section would also crawl dowu iuto Iowa and Nebraska, and in those fields try to work off some of their surplus. This talk might not he palatable and eucouraging to some of the dealers present, but it was nevertheless true. When Mr. Camp had done speaking, the president adjourned the meeting.

QUEBEC FORESTS.

The Montreal *Gazette* says :—There are some interesting features in the last report of the Commissioner of Crown Lands of this Province with which some of our readers will be glad to be made acquainted. The result of the financial transactions of the Department for the year 1881-1882 is highly satisfactory. The amount realized from the sale of Crown Lands, Clergy Reserves, Gold Mines, Woods and Forests, and other resources, together with certain fees and deposits, attain a total of $818,283.11, an increase of $148,994.85 over the receipts of the preceding year. On operations so favorable it fell to the lot of no previous Commissioner since Confederation to report. They took place during the tenure of office of the Honorable Mr. Lynch's predecessor, and it is to be hoped that the satisfactory state of things which he has had the pleasure of announcing will go on improving (as they have begun) under his own administration. This large income was mainly derived from the sale of Crown Lands and, more especially, from the collections on account of woods and forests. Tho increase of ordinary revenue from timber dues and ground rents was $230,930.63. Of this sum the greater part arose from the additional dues imposed by the order in Council of November 12, 1880. The beneficial effect of this order began to be apparent during the last fiscal year and to what extent it is likely to affect the future receipts of the Department may be gathered from the statement that from the branch of woods and forests the figures for the last six months were $600,000. A sale of timber limits of comparatively small extent in October, 1880, produced $26,921, and though, greatly exceeded by a previous sale in the fall of 1880, which brought the handsome amount of $132,774, its success, with other indications, gives reasons to hope for good returns hereafter from this source of revenue. The limits thus leased by auction coveriug an area of 715 miles, situated for the most part in the eastern portion of the province (in the counties of Montmagny, Rimouski, Bonaventure and Chicoutimi), brought to the treasury an average bonus of $36.58 per square mile. This is more than double what has been hitherto obtained for limits of similar situation.

The Commissioner recognizes the obligation that presses on the Governmont, in view of the rapid denudation of timber areas in Canada, as well as elsewhere on this continent, of taking measures for the preservation, by judicious working, and, where possiblo, for the renewal of our forests. Mention is made of the evidence that the persons most concerned by business and associations in that branch of economy have taken the matter into earnest consideration, and have seen at last the expedieney of atoning, as far as practicable for the waste and neglect of the past. In this connection the Forestry Congress, which met in this city in August last, was an event of no slight importanee, as significant of a determined purpose to utilize experience and combine effort in that direction. Of the good influence of the Congress, tho recommendatien of the Commissioner to adopt its resolutions, as far as circumstances permit, is itself a proof. The Hon. Mr. Lynch gives a pithy interpretation of one of the most important of the resolutions, whose force he acknowledges as a neutralizing of so-called colonizing movements, whose real object is the pillaging of our forests. To effect that object, to distinguish between land that is fit only for forest-bearing and land that may be advantageously cultivated, he points out that it is necessary to have minute and detailed inspections of our vacant lands, and he promises that those already commenced (to ascertain the manner and extent in which survoying operations should be carried on) shall be prosecuted with renewed vigor. He is already able, he adds, through the sustained conscientious inspection of Mr. Joseph Bureau, Forest-ranger, to exercise control over all the region between the Du Lievre in the west, and the line dividing Ottawa and Argenteuil counties in the east, and from the 46th parallel towards the south to the limit of Ottawa County in the north-west. As to forest fires (tho prevention of which formed the subject of the other recommendation of the Congress) Mr, Lynch is of opinion that, in addition to existing legislation, measures more energetic than any hitherto adopted must be undertaken, if the law is to be, as in the past, more than a dead letter. It is satisfactory to know that Mr. Lynch has held conferences with some of the chief lumber merchants, who are owners of limits and equally interested with the Government in the preservation of the forests from destruetion, for the purpose of arriving at some plan of comnion action. It is to be hoped that the result will be such a system of supervision as will prove efficacious. Of course, if the organization approved of should turn out to be futile as an agency of fire-protection, there would be no use in wasting money on it. But, on the other hand, if it is possible to apply protective measures on a plan and scale which would prove largely preventive of such holocausts as have ravaged our forests in past years, the expense would be a trifle, compared with the good accomplished. At any rate, it is well to know that the Commissioner is directing his known capacity and energy to the object in question and, with all who are interested in the safe-keeping of our forests, we trust that his efforts will be successful.

ELM BARREL HOOPS.

Tho *Lumberman's Gazette* of Bay City, Michigan, says :—The manufacture of barrel hoops from olm timber dates back some 20 yoars. The pioneer in this new industry received the usual encouragement that was meted to inventors, who were in advance of the masses. The now hoop (made by a machine) was regarded with distrust, and those few who engaged in its manufacture were considered foolhardy and and only a few removes from a lunatic asylum.

The drummer of those days who attempted to place the hoops was no sinecure. He was the inventor and manufacturer as well, and his reception on the market may be imagined, when few hoop dealers would take them as a gift. However, continued perseverance and enterprise, guided by a seeming prophetic vision of the necessary wants of the near future has won, and we see in the elm hoop of to-day, one of the most important staples of the country.

The first conception of the manufacturer of olm hoops was to saw the logs into planks of the required thickness to make the hoop the required width, then by cutting from the edge of the plank into strips, the necessary thickness required for hoops.

This seemed to be tho only way that could be devised, and all the new and improved hoop machinery that were subsequently invented arrived at the original result. The log had to be cut into plank, increasing labor and cost, and decreasing value and quality by making two-thirds of the hoops bastard. With all these attending difficulties and imperfections the hoop has steadily grown in favor and the consumption is rapidly increasing.

Two years ago F. L. Wilson realizing the importance of the cut hoop and noting the growing local demand in the Saginaw Valley, conceived the idea of cutting hoops direct from the log, adapting the machine to the natural growth of the timber, and not the timber to the machine, uniformly converting the log into perfect legitimate (not bastard) hoops without the aid of saws, and so well has he succeeded that to-day may be seen at the Wilson Hoop Company's works, West Bay City, the most perfect automatic hoop cutting machine in the World.

The mechanical construction of this machine has no complicated parts to get out of order, and considering the unerring work it performs makes it one of the wonders of ingenuity, simplicity and durability.

The motor is a 10x18 engine—directly attached—no belts used.

The feed is automatic and consists of two distinct motions, viz: A rotatory, revolving the log on its axis which produces the thickness of the hoop; a horizontal, moving the log on horizontal ways by means of racks and pinions on a plan with its axis which produces the width of the hoop.

The feed of mechanism is so perfect in construction and accurate in action, the thickness of the hoop can be varied at will the one-hundredth part of an inch.

The logs are cut the required length and placed in large vats, where they are steamed from 36 to 48 hours. The bark is then easily removed before being placed in the machine. Then, after being firmly clogged, the log commences to revolve, and the hoops are removed one by one, at the rate of 90 per minute. When the log has been reduced to a given diameter it ceases to cut, and the spalt, or heart, is replaced by another. This change of logs only requires 30 seconds time. Although elm hoops have been used for a number of years, their strength and durability has never been demonstrated to such an extent as to give them a place and preference over the split or racked hoops until this system of cutting direct from the log was perfected, giving to each and every hoop uniformity of width, thickness and grain. The use of these hoops is no longer an experiment but has been fully tested, not only scientifically and theoretically, but practically by scores of our best coopers and business men throughout the valley.

This newly developed industry gives employment to upward of thirty hands, eight girls are included in this number, who find tho work agreeable and give reasonable satisfaction.

Business has been prosecuted by the company with unusual vigor and energy during the winter months, and they have now on hand a large stock from which to draw during the coming salt-packing season.

They have also secured in their boom and on the bay shore sufficient timber to enable them to supply customers throughout the year to come.

This industry has opened up to the farmers of this valley a new source of revenue—the timber that for years has been consigned to ashes in the log heap. As civilization and improvements have advanced, it has suddenly been discovered to have a value, and a ready market, giving to them a chance to contribute something more towards the wealth and prosperity of themselves and their surroundings.

This invention is a credit to the city as well as a permanent and lasting reality, the product filling a long felt need. The enterprise should be encouraged, and to that end we urge our patrons who use barrel hoop to examine for themselves.

FOREST CULTURE.

In view of the immense consumption of lumber in the United States and the rapid annihilation of the great forests, the importance of growing timber wherever it may be done advantageously cannot be too strongly emphasized. To many the first attempts at growing trees is often discouraging, and they give it up as an unprofitable business. This is especially true on the prairies, where the young trees are exposed to the full weight of the winds which sweep over them, bending, breaking and dwarfing them. Another difficulty in the west is that fencing is expensive, and too often the land set apart for growing trees is not as well protected as it ought to be from the destructive feet of cattle, which do more damage by breaking down the trees and cropping the foliage than is done by the winds. One hungry steer in a very young forest will do more injury than a full-grown hurricane. Many are too economical of their seed, fearing that they will get the trees too thick. There is not much to be feared on that score. The closer the trees are the better; the strong will make room for themselves by killing and feeding upon the weaker whenever the later are no longer of any service as shields to the bodies of the strong against heat and cold, men, beasts, insects and other foes. All the forces of nature will contribute to the "survival of the fittest."

One great mistake, especially in the prairie states, is that of appropriating the bits of timber land, after the timber on them is cut off, for agricultural purposes. If these "clearings" are let alone after the old timber is cut and removed, a new growth will spring up which will develop much more rapidly than any hand planted forest, and the second growth will be better than the first. We have seen in Kansas dense growths of young hickories, which in six to ten years after the original timber was cut, would be from thirty to forty feet high, the bodies long and straight and from six to eight, often ten, inches in diameter one foot from the ground. These young forests would produce per acre many cords of stove wood, for which they would almost invariably be cut—the owners considering the present needs of more importance to them than any investments for their children, if perchance they had any of their own to provide for.

Perhaps it is not worth while to urge upon the railroad companies the advantages that might accrue to them from scattering walnuts, acorns and seeds of other forest trees on their land bordering their tracks. The stockholders rely more largely upon the net earnings of the roads to boost the quotations of their stock on Wall Street than upon the present or prospective intrinsic value of their plant. Neverthless, there is a speculation in this suggestion of more value than may at first sight appear. The time is coming and is not far distant when wooden ties will be comparatively scarce and expensive, and iron will be worth much more per ton when the supply of wood is exhausted. The seed may now be readily secured; when the trees are consumed the supply of seed is destroyed. While it is still possible to get the seed it ought to be used. In fifteen or twenty years almost every railroad in America might have all the timber it would need to replace decayed and decaying ties. The benefits of such belts of timber would be manifold, and no more useful than ornamental. The interlacing roots would prevent the washing of the soil into cuts; the branches would afford windbreaks and shade; they would increase the moisture and check the sparks from locomotives which in dry seasons consume the fences and pastures of the farmers. Of course there would be some dangers to guard against, such as result from the accumulations of dry leaves and falling trees, but such contingencies are slight compared with the advantages to be secured.—*The Industrial Monitor.*

HOW TO TAKE OUT SCREWS FROM WOODWORK.

The following practical hints on this subject are from a long article in the London *Builder* on "The Use and Abuse of Screws in Woodwork," and may save our readers much vexatious effort, not to say profanity, in the extraction of old and obstinate screws :—

A difficulty is often experienced by persons who wish to withdraw a screw, by finding that though it will turn round under the application of the screw-driver, yet it will not unscrew out. In this case a well-grounded suspicion may be entertained that the screw in question was driven, or nearly driven, home originally by the hammer, instead of gradually by the screw-driver, and that no regular thread corresponding with the screw exists in the wood. Under such circumstances it becomes necessary to wrench off the hinge or hinges by force, at the risk of their breaking, and this often happens. When hinges have lain undisturbed for long years on old doors or other framings, perhaps for a quarter of a century or double that time, it becomes difficult to extract the screws, although they may have been originally properly driven. This arises from the screws rusting in the wood, and sometimes from other causes. Workmen themselves often fail to withdraw a screw, and are forced to break the hinge to enable them to get under the head of the screw, and wrench it out. They often split, and break too, fancy and delicate wood-work articles, in their efforts to take off hinges, locks, mountings, and other finishings, despite that simple methods exist for extracting screws that have rusted in the wood. One of the most simple and readiest methods for loosening a rusted screw is to apply heat to the head of the screw. A small bar or rod of iron, flat at the end, if reddened in the fire and applied for a couple or three minutes to the head of the rusted screw, will, as soon as it heats the screw, render its withdrawal as easy by the screw-driver as if it was only a recently inserted screw. As there is a kitchen poker in every house, that instrument, if heated at its extremity, and applied for a few minutes to the head of the screw or screws, will do the required work of loosening, and an ordinary screw-driver will do the rest, without causing the least damage, trouble, or vexation of spirit. In all work above the common kind, where it is necessary to use screws, and particularly in hinge work and mountings, fancy fastenings and

appliances affixed to joinery or furniture work, we would advise the oiling of screws or the dipping their points in grease before driving them. This will render them more easy to drive and also to withdraw, and it will undoubtedly retard for a longer time the action of rusting.

THE NEW FOREST OF ENGLAND.

The London correspondent of the Detroit *Free Press* says :—The American reader will be somewhat surprised to learn that within a comparatively easy distance of London there is a forest extending over twenty-three miles of country in one direction and eighteen miles in another and that 92,000 acres of it are the property of the British Crown.

Arrived at Ringwood the traveller will see much inferior soil, but the wild character of the country does not seem to reach its climax until after he enters the forest boundary, two miles beyond the above-named place, and then the wilderness begins to spread and oxpand on every side.

Sometimes no houses are seen for miles, save here and there a mud-wall cottage, and in the distance the cotter's pony and the cotter's cows wandering among the herbage and wearing each a color with a bell. Here it may be incidently stated that the ancient forest rights which permits cattle and horses to run upon the common have made no provision for sheep, perhaps because it was a run for deer.

As the train whirls the traveller on he sees a troop of shaggy ponies wandering about in the vain hope, as it seems, of finding something to eat. Hundreds of ponies may there be found who have reached old age and never did any work except the dreadful drudgery of being compelled to move constantly about in the often vain hope of finding something which they could eat. In some parts there is nothing to prevent them from strolling many miles—and they do so wander frequently—their owners seldom looking after them in the summer months. In situations where the horses are so very poor there are no neat cattle. They cannot live upon such scanty fare.

The commons generally cannot be said to be wanting in fertility, but in the swamps rushes does not even grow to more than half the average height, while gorse and the native heather are short in stature and grass in many parts positively a scarce commodity. Some of the most elevated parts are wilderness of sand and gravel, discolored by scrubby herbage for which the average dairy farmer would be unable to find a name. But within this wide, outlying range of desert there are some lovely spots, and heightened by contrast, the really beautiful appears more beautiful still.

It is upon these cases the forest villages are built, and are generally neat and pretty, with good soil, good water, and good roads, and almost hidden with foliage and flowers. The 'Squires' country seats are found there, it being a favorite sporting district and celebrated for fox-hunting. Not many years since 10,000 head of dear, the property of the Crown, ran wild over the desert, and every person ate venison ; but the deer are all destroyed now, principally to put an end to poaching and its attendant evils.

The forest at one period was much neglected; squatters settled on its borders and acquired possessions which they held almost as freeholds ; and when timber was required timber was had. No care was taken, and much fine timber was lost to the nation. Now all is changed ; hundreds of acres at a time are fenced in and planted, and much of the best land is bearing thriving plantations of oak and fir. In many parts the fir trees are exceedingly fine ; seldom are they found elsewhere so tall, so straight, and so clean in the bark. Very valuable to the British nation will the timber-bearing portion of the forest ultimately be. Not many, if any, decaying trees are now there, and in the parts not recently planted are many fine ones which will grow and thrive for many years to come. A visit to such historic ground as the New Forest would well repay the traveller in quest of health and picturesque scenery.

The *Trent Valley Advocate* says that Messrs. Gilmour & Co., intend establishing a large lumber yard at Napanee.

FOREST PROTECTION IN QUEBEC.

Hon. Mr. Lynch in the Quebec Legislative Assembly on March 8, moved that it shall be lawful for the Commissioner of Crown Lands to employ, between the 1st of April and the 1st of November in any year, for the more effectual prevention of forest fires, such a number of men as he may deem necessary for that end, and he may, for any portion of the Province of Quebec, appoint an officer for that purpose, who shall be known and designated as the "fire superintendent." In support he made a very powerful speech, referring to the recommendation of the Forestry Congress, to the message of President Arthur of the United States, to the opinions of Mr. Russel and of Professor Sargeant, and to many other corroborative evidences of the necessity of protecting our forests against their great scourge, fire. He referred to the diminution in the supply of white pine, and felt sure that the limit-holders, who were equally interested with the Government in the protection of our forests, would willingly consent to a small imposition for the purpose of securing this desirable supervision. He alluded to the law now in force in Ontario concerning forest protection, and spoke of the desirable manner in which it had worked. He did not know whether, if the system had been in vogue in this province, it would have succeeded in preventing the large conflagrations which we have experienced, but he looked forward in the future to the establishment of a body of well trained men, who would, at all events, be instrumental in preventing fires heretofore caused by carelessness or negligence. He would be glad of any suggestion from members of the House which would make his measure more practical, and desired particularly that the Legislature should assert the principle of adopting an effectual means, by means of no large outlay, of forest protection against fire. [Applause.]

Mr. Joly warmly supported the resolution, adding the hope that the Government would appoint as superintendents honest and useful men, and not parties recommended to their favour for political reasons, and offering a large number of practical suggestions, especially with regard to railways running through forest lands.

Mr. CARBRAY said the Government could not take too much interest in the protection of the forests. Within the last twenty-five years it was probable that more timber had been destroyed by fire in the province than had been cut for the market. He had heard, only to-day, a lumberman complaining of the laxity of the rules of the Crown Lands Department with reference to the cutting of trees measuring less than twelve inches at the stump. After the Dominion subsidy, our forests now supplied almost our only source of revenue, and he could not recommend too strongly to the hon. Commissioner of Crown Lands the great importance of taking means for their preservation, and to render effectual the present regulations of the Department affecting them. He was sure no member of the House would begrudge a reasonable amount to be set apart for this purpose from the revenue derived from our Crown lands. [Applause.]

Mr. Flynn followed, expressing the pleasure with which he had heard the remarks which had fallen on this subject, both from the hon. Commissioner of Crown Lands and also from the hon. ex-leader of the Opposition. He spoke at some length in favor of the resolution.

Mr. Beaubien also supported the resolution, suggesting, amongst other things, that the guardians who should be appointed might be employed in seeding down such portions of the bush as had been swept by fire, and were unfit for cultivation, and instancing trees now thirty feet in height, the seed of which he himself had planted. He also spoke of the waste occasioned by the manufacture of square timber, speaking at considerable length.

Mr. Marchand made some lengthy remarks in favour of the resolution.

THE U. S. FAR NORTHWEST.

Practically, the whole country between the Minnesota prairies and the Rocky mountains is bare of timber. There are little strips of forest trees along the water-courses in Dakota, but they consist mainly of cottonwood, soft maple and alder, and furnish only a scanty supply of fuel to the settlers, and are of no valuo as a source of building material. West of the Missouri there is nothing worth sawing up into lumber until the advanced spurs of the Rockies are reached—the Big Horn, the Belt, the Judith, the Big Snowy and the Yellowstone mountains. In the gorges running up their sides there is sufficient "bull pine" and spruce for the settlers' purposes and for railway ties and bridge timbers, but there are no large, well-timbered areas. On both sides of the main divide of the Rockies about the same condition is found. The pines are somewhat larger, and some cedar is met. For want of something better, the timber is of great value for local consumption, for fuel and building purposes in the neighboring valleys, but this is all that can be said of it. Not until I reached Clark's Fork of the Columbia, or the Pend d'Oreille, as it is known to the settlers, did I see any extensive body of good timber. On both sides of that stream, between she Cœur d'Alene and Cabinet mountains, lies a heavily-timbered belt of about one hundred miles in length by thirty in width, reaching down to and around Pend O'reille Lake. The trees are "bull pine," cedar, hemlock and spruce, with a little white pine. The western slopes of the Cœur d'Alene mountains and the Bitter Root mountains, which are a continuation of the same range, are moderately well timbered and furnish material for fuel, fences and buildings for a wide stretch of rich, bare country farther west. From these mountains, westward to the narrow valleys running up into the Cascade range, the country is nearly destitute of forest growth. A few stunted pines grow on the sides of the deep, narrow valleys through which the streams run. Along the lower course of the Columbia and around Puget Sound there are immense forests of fir, furnishing a practically inexhaustible lumber supply. Eastern Washington, fast becoming a great wheat-field, feels most the lack of forests. Western Oregon, including the fertile, well-settled Williamette valley, is well supplied from both the coast and Cascade mountains, while western Washington is all a vast forest, where the clearings are mere specks upon the immense expanse of woodland. This magnificent forest is destined to be a source of great wealth for centuries to come. The lumbering operations up to this time, although very extensive, have only notched it here and there at long intervals close to the water-side.—*E. V. Smalley, in the Century for February.*

REPLACING WHITE PINE.

The Chicago *Times* says :—One noteworthy fact in the lumber business of Chicago is the annual increase in the supply ot the Gulf states. By many it is claimed that this lumber will be the immediate successor of white pine in western markets, should the latter cease as soon as expected. At this time, however, the cost of transportation does not allow large shipments of southern lumber, and long timber and dressed flooring are the only grades of yellow pine sold in Chicago. The latter, being dressed before shipping, is greatly reduced in weight, and the current prices afford a satisfactory profit. Enough lumber has already been received from the south to remove any fear of a lumber famine in this city for many years, as, if it can pay present rate of freight, it will come naturally to a large market, when the south has more railway competition, which increasing wealth and enterprise are sure to supply.

Letter from Member of Congress.

HOUSE OF REPRESENTASIVES,
Washington, D.C., Feb. 19, '82.

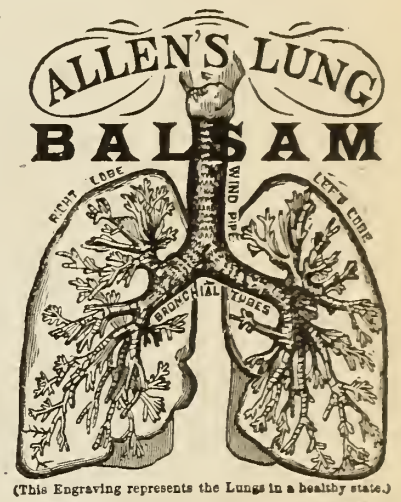
GENTLEMEN,—Inclosed find $1, and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a bad cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine ; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GROUT.

GOOD ADVICE.—If our readers will accept poffered advice, they will always keep a bottle of Hagyard's Yellow Oil at hand for use in emergencies, such as Burns, Scalds, Wounds, Lameness, Croup, Chilblains, Rheumatism and all varieties of aches, pains and inflammations. It will ever be found reliable,

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery, decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars ; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto



(This Engraving represents the Lungs in a healthy state.)

THE WAY IT WILL AFFECT YOU.

It excites expectoration and causes the lungs to throw off the phlegm or mucous; *changes the secretions and purifies the blood;* heals the irritated parts; gives strength to the digestive organs; brings the liver to its proper action, and imparts strength to the whole system. SUCH IS THE IMMEDIATE AND SATISFACTORY EFFECT that *it is warranted to break up the most distressing cough in a few hours time,* if not of too long standing. *It is warranted* TO GIVE ENTIRE SATISFACTION, EVEN IN THE *most confirmed cases of Consumption! It is warranted not* to produce costiveness (which is the case with most remedies), or affect the head, as it contains no opium in any form. *It is warranted to be perfectly harmless* to the most delicate child, although it is an active and powerful remedy for restoring the system. *There is no real necessity for so many deaths by Consumption,* when ALLEN'S LUNG BALSAM will prevent it if only taken in time. Physicians having consumptive patients, and who, having failed to cure them with their own medicine, we would recommend to give ALLEN'S LUNG BALSAM a trial. *Sold by all Druggists.*

PERRY DAVIS'
VEGETABLE
PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burus, Scalds, Old Sores and Sprains, Swellings of the Joiuts, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

HEAD BLOCKS, ETC.

The head blocks must be accurate and durable, and move easily and rapidly. They should be small in construction, and of strong material well put together. For general purposes, setting to 1-16 of an inch is close enough, but in some cases they are needed to set 1-32 of an inch, as in making 1 1-16 inch boards with ¼-inch saw kerf, as in this case if the blocks set to 1 1-16 only, the sawyer would have to leave the lever at the 1 1-16 inch pin every other throw. In some cases there is an independent knee to thrown ahead of the other when a tapering log is to be cut; but a joint between the knee and the backbone is undesirable, and another way of doing the same thing is to have a strong slide which can be extended 6 inches; which will answer very well where short logs are to be cut with but little taper to them, as in the northwest. But where hard wood is to be sawed there will be need of more taper, sometimes over a foot in short logs, and in these cases the independent knee will be necessary.

It is well that the blocks be faced with steel, the facings being renewable when necessary, (say in two or three years.) To allow free passage for bark and dust, the ends of the blocks may be left open. The set shaft should be good and strong so as not to spring. In some cases the blocks are brought back by coil springs, which have the advantage that they take up lost motion,

If there be two many notches, there will be less liability of the pawl catching the right one, one or more notches being lost with a heavy log, and one or two too many being got when the log gets sawed down. Thus the first boards will be likely to be too thin and the last ones too thick; and there will perhaps be remnants on the blocks that will be of no use.

The set-work racks, where racks are used, should be of cast steel, so that no motion will be lost. If there be self receding blocks, there should be baffers to catch them. There should be a scale to show the distance from the knee to the saw, and it is very convenient to have one covering the back ends of the blocks, which will be more convenient for the setter. Blocks should be broad, heavy and strong. Pawls are best of cast steel, and should be broad.

There is advantage and economy in good sawing for every one concerned. If the trees are sold by the thousand, the seller gets more for his trees. If the mill is stocked by the job, the stocker gets more for his labor. If the sawyer saws by the thousand feet, he gets more money for sawing the same; and the mill owner gets more, too. The raftsmen like well sawed lumber, because it packs closely, there is less danger that boards outside of the grubs will wash out, and thick boards do not have to be put out to prevent this; water and mud are excluded, and the raft runs lighter and draws less water. Builders prefer well sawed lumber.

There is one thing that can be said in favor of very strong mills; that very long logs, especially if they be hewed, can be sprung considerably and thus made straighter before sawing. For this purpose there may be upon each knee a windlass with a lever and latch. Ten feet apart is a good distance for the blocks.

There are cases where once in a great while very long lumber comes in. To provide against this, the carriage may be of the ordinary length, but in two sections, doweled together so that they will match exactly, and held together by stout couplings. Then when the extra long logs come in the carriage may be opened out lengthwise and the long logs taken in.

For making stock boards it is well that the blocks have wings which will prevent the springing of the lumber as it gets thin, and will thus keep the last boards of right thickness and surface.

Modern mills have live rolls to catch the lumber as it comes from the saw, and take it to where it is needed. These rolls may be of iron, say 24 inches long and 9 to 12 inches in diamster, being hollow, and running in babbitted bearings kept well oiled. They may be driven by a counter shaft having friction bevel wheels, or a vertical shaft through the floor having either bevel gearing or a belt.

The dogs should be so proportioned that they will hold large, small, or medium logs. It is well that their points be steel bits which may be taken out and sharpened, or replaced. It is better that they hold the log or cant by its edges instead of spoiling its face.—*Lumber World.*

TREE PLANTING.

The subject of tree planting is becoming more fully impressed on the minds of western settlers as its importance becomes more fully recognized. Farmers are planting trees for windbreaks for the protection of their crops on the prairie land, and while they are serving this purpose they are constantly improving in value for the timber they produce, for which ample returns will be received in the future. The railroad companies also have awakened to the importance of this subject, and are substituting belts of timber for the fences, with which they have hitherto attempted to prevent snow blockades along the line of their tracks. These live fences have been substituted for pine fences by the St. Paul, Minneapolis & Manitoba road, with excellent results, and the Northern Pacific is also following the example, and will thus attempt to prevent the snow blockade of their tracks which have hitherto caused them such serious annoyance. It is considered that from its durability and other advantages the live fence will be much cheaper and more economical, as a pine fence to be anything like serviceable, must be at least eight feet high, and this costs in the neighborhood of $800 per mile. The necessity of tree planting on the western prairies is also recognized, not alone for the timber production, in order for its utilization for lumber purposes when it shall have attained sufficient growth, but also for the climatic effects and the increased rainfall, which many scientists maintain is derived therefrom. Whether this theory be correct or not, it is sustained by many of the foremost men, who have given their best thought and consideration to the investigation of the subject. Certain it is, also, that it has been practically demonstrated that in many prairie countries, where tree-planting has been extensively engaged in, the rainfall has been materially increased, and the surrounding country has been vastly more productive, and corn and other crops have prospered where they had previously failed. In many sections of Dakota where in former years nothing but a species of corn known as "squaw" corn would mature, since timber belts have been cultivated and matured, other grains have superseded the corn alluded to, and the territory has become prolific with crops which previous to the timber growth alluded to, were known to be if not impossible, at least very improbable of successful results. In some parts of Dakota and Nebraska in which fifteen years ago the rainfall for an entire season amounted to only six or eight inches, since its occupation by settlers who have tilled the soil and planted large tracts of young timber, it has increased very materially, running as high as 100 per cent. While some writers maintain that the increased rainfall springs from the cultivation of the soil, the more general excepted theory is that it has been produced by the tree growth and its action on the atmosphere. This view is also further partially sustained by the moisture produced in many sterile and arid sections further east, after the land alluded to had been adapted to the growth of timber as an experiment because of its complete usefulness for agricultural purposes. However it may be, certain it is that tree planting is being more extensively engaged in and receiving far greater consideration on the western prairies than formerly, and this result is doubtless superinduced by practical demonstration of the beneficial effects, not only as regards climatic influences, but also for the profits derived in the increased value of the lands and the constantly increasing value of the timber for utilization for fencing, building and other purposes.—*Lumberman's Gazette.*

DUTIES ON LUMBER.

Mr. Royal moved in the House of Commons on Thursday, March 1st, for copies of all correspondence relating to the abolition of duties on lumber imported into Manitoba and the North-West Territories. In doing so, he called attention to the very high duties which prevailed on this necessary article and the necessity of having them removed, or materially reduced on lumber imported into the North-West. It was a well-known fact that the country depended almost entirely for its lumber supply upon that brought in from the United States, and the cost on account of duty increased about $8 per thousand feet. Though the country possessed valuable pineries, they were not as yet developed, and a remission of the duty for a few years at least, till the home supply could be utilized, was very desirable.

Mr. Bowell said that the papers asked for would of course be brought down. Until they were produced and all the facts were before the House, it would not be possible to discuss the question intelligently. He might say though that the logs cut of which lumber was made and lumber in certain States were admitted free. He might also remark that a large number of logs had been purchased during the past year in the Western States, and floated down the Red River to be imported free of duty and manufactured in Winnipeg. It would be for the hon. gentleman to consider, when the papers came down, how far that interfered with the investments which had been made. He was not prepared to say that the price of lumber imported into the North-West was such as to justify the statement that the duty imposed amounted to $8 per thousand. To say that would be equal to saying that lumber purchased in Minnesota cost $4 per thousand. He was quite satisfied it would be found that large quantities of lumber were imported from Thunder Bay into Manitoba, and that ere long the north shore of Lake Superior would furnish the North-West with a very large proportion of its wood.

Mr. Blake said that if the consumer was to derive any advantage by getting his lumber from within Canada, it was clear that he must now be paying duty.

Mr. Charlton suggested to the Government the propriety of making the duty on lumber specific, instead of *ad valorem*. The duty was now twenty per cent., and the American Government imposed a specific duty of $2 a thousand, but our duty, if the price of lumber was $40 per thousand, reached $8 per thousand.

Mr. Watson (Marquette) said the price of lumber in the North-West was excessive, and in his part of the country the freight and duty together came to more than the original cost of the lumber at Minneapolis. The timber limits of the North-West were certainly being developed, but they did not half supply the demand. In view of that and the fact that freight rates were high, lumber should be admitted free. As far as Manitoba was concerned she did not require protection. Under the present policy, she had to buy her machinery and agricultural implements from Ontario, and to pay a price for them higher than she would have to pay if she could bring them from the other side. The Minister of Customs had said that logs came in free, but the hon. gentleman ought to know that the admission of logs free of duty did not lessen the price at all.

Mr. White (Renfrew) was sure the hon. member for East Simcoe (Mr. Cook) would not adopt the view of the hon. member for North Norfolk. The objects of the last speaker, regarding the lines upon which manufactured American articles should be admitted into Canada, Georgian Bay, and Lake Superior districts, were to supply Manitoba with its lumber, and the hon. member for East Simcoe (Mr. Cook) was making preparations to secure that trade for his firm. That hon. gentleman would therefore not favour the reduction or the removal of duties.

The motion was carried.

THE BRISTOL TRADE.

Messrs. King Brothers have issued their aual timber circular, being a report of the timber trade during the year 1882, which contains much interesting matter concerning the course of business at this port during the last twelve months.

In reviewing the timber trade here for the past year, they say it must be stated that the tonnage employed in the importation has been 80,248 tons register, against 68,328 tons register for the previous year. The importation in cubic feet has been 22 per cent. heavier than in 1881, 15 per cent. less than 1880, and about 5½ per cent. above the average of the last five years. The consumption, fortunately, has been slightly in excess of the importation, and 6½ per cent. in excess of that in 1881, thus showing that a fair amount of trade has been done, though generally at low values. Businesss throughout the past year was done at very close prices, and competition was not only confined to importers here, but also extended to those of the neighboring Channel ports, who sold largely in this market. We trust soon to have a fresh outlet for goods from this port by means of a new railway now prospected, which will not only be in the heart of our city, but in all probability around its quays.

Canadian Wood.—Quebec white pine.—The importation has been much below the average, consisting of but 7,320 loads, the whole of which excepting 358 loads, were for railway purposes. The enhanced prices for these goods so limit the consumption that, notwithstanding the smallness of the import, the stock carried forward for general trade is 180 loads, being only twenty loads less than this time last year. Red pine.—No import. The consumption has been 47 loads, and the stock on hand 20 loads. Oak.—The figures show a decrease in the importation of about 65 per cent. compared with last year. There has been a fair consumption, and the stock carried forward consists of 44 loads. Elm.—There has been only a sluggish demand; the importation was small, and the stock on hand is only 8 loads. Ash has been in good request; the consumption has exceeded the import, and the stock held is less than half of last year. Walnut.—No import. Stocks are quite cleared. Birch.—No import. There has been a good demand, and parcels that have been brought in coastwise have found ready buyers. The stock now held is nominal. Deals.—The importation is nearly equal to that of last year, about 30 per cent. of which came forward by the Montreal Line steamers, and included several parcels for inland dealers. Prices ruled high; there has, however, been a fair inquiry, and the stock carried forward is 37½ per cent. less than last year, consisting of 1,103 standards. Staves.—Only a small trade is now done in these goods, the consumption being so limited. Stocks are quite cleared.

New Brunswick and Nova Scotia Goods.—Spruce deals.—The importation has been larger than usual, and shows an increase of nearly 20 per cent. over 1881, whilst the consumption has been slightly in excess, thus leaving the stock on hand 2,312 standards or about 16 per cent. less than last year. Good values were obtained for these goods in the early spring, towards summer the chartering of several large steamers at low freights brought down prices, but with the withdrawal of the steamers from the deal ports freights rose, and deals increased in value until the end of September, since which there has been a gradual decline in price. Pine deals are not in favor, and have been only lightly imported. Birch, owing to the scarcity of Quebec, has been in good request, and with the exception of a small cargo now landing stocks are quite cleared.

TREES IN STREETS FROM A SANITARY POINT OF VIEW.

An interesting controversy on the utility of trees in streets and open spaces in cities has been lately going on in the Geneva journals. It arose out of a discussion in the International Hygienic Congress, which was held in Geneva in August, and Dr. Piachaud, a member of the Congress, has since contended, in the *Journal de Geneva*, that trees in streets do more harm than good; that they impede the circulation of air; and that as for the shade they afford, people who do not like sunshine have only to keep on the shady side of the street. Instead of planting more trees in towns, as some propose, he would rather, in the interests of hygiene, remove all existing trees. In reply to Professor Goret, of the University, points out that the functions of trees in streets are not limited to acting as screens for sun-shunning wayfarers; they temper the heat, and serve as a protection against dust. The evaporation from their leaves tends to keep the surrounding air cool and moist. One of the best means of refreshing the air of a sick chamber is to place in it plants and branches, and sprinkle them with water. A

like effect is produced by trees. Sunlight is necessary to health; but trees, if not to thickly planted, do not intercept sunlight; the perpetual vibration of their leaves and swaying of their branches admit the light every instant, and in sufficient measure, and serve, moreover, to protect the eyes from the noon-day glare. So far from trees impeding the circulation of air, they help to purify the air; the evaporation from their leaves determines a current from above, and the fresh air thus brought down helps to drive away the heated and dust-impregnated gases of the streets. Another useful property of foliage is that, while in hot, dry weather it moistens the surrounding atmosphere, thereby rendering it fitter to breathe, this effect, which is due to evaporation, ceases in wet weather. Trees, moreover, act as purifying agents by absorbing carboni acid and giving out oxygen. But the action of trees on the air is far less important than their action on the soil. Their roots draw up stagnant waters, and absorb the organic matters contained in the filth from which the streets of a town are never free, and which, after infiltrating the ground, are a frequent cause of fevers and infection. Trees, in fact, have the same on the sub-soil of towns as fields have on the contents of their sewers,—they act as disinfectants. Taking these facts into consideration, Professor Goret ventures to differ from the conclusions of the Hygienic Congress, strongly recommeds the planting of trees in streets and squares. But they must be planted with judgment. They should be placed at proper distances apart, and the branches should not be allowed to come in contact with the buildings near which they grow. The sorts best adapted for street planting are those which grow to a considerable height and spread out their branches. The fashion that prevails in some continental cities of cutting trees down to a uniform size is highly objectionable. The branches of trees so treated becomes so compacted together as to be impervious to light, and the shade they give, although deep, is too circumscribed to be of much use.—*Boston Journal of Chemistry.*

INDIA RUBBER DISCOVERED.

Two species of India rubber yielding trees have recently been discovered in British Guiana of a character which insures their future profit to the colony. One is a near ally of the para rubber tree, and is known to the aborigines of the country by the name of Hatie, its botanical name being *Hevea spruceana*. It is about sixty feet high, with a trunk diameter of twenty inches, and is found on the alluvial oft-flooded land of the creeks and banks of the lower parts of the rivers, where in places it is abundant. The second is not scientifically known yet, as flowering specimens of it have not been obtained. It is one of the largest trees of a forest flora peculiarly rich in large types. The trunk is four or five feet in diameter, and runs up straight sixty or seventy feet unbranched, above which the head extends many feet more. On its discovery recently a few branchlets could only be obtained by shooting them off with large shot. The bark is thick and wonderfully rich in milk of excellent quality, and the elasticity and tenacity of the rubber seem to be unsurpassed. It is scattered in individual trees over a wide area of colony. The produce of these trees has not been put in the market yet, collectors apparently being unacquainted with them. Samples, however, have been sent to England to be valued. The discovery of these was made by Mr. G. S. Jenman, Government botanist, during an exploration which he lately made in British Guiana.—*London Daily News.*

A CURIOUS FIR-TREE.

Switzerland has its old chesnut-trees on the banks of Lake Leman, and the ancient linden of Fribourg, the history of which is said to go back to the time of the royal conflicts with Charles the Bold. M. Louis Pire, President of the Royal Botanical Society of Alliaz, Canton of Vaud, which he believes to be older than the linden of Fribourg, and considers entitled to be regarded as the oldest and most remarkable tree in the canton, if not in the whole confederation. It is growing near the baths of Alliaz, at a height of about thirteen hundred feet above the hotel, and forty-five hundred feet above the sea, surrounded by a forest of firs, which it overtops by more than thirty feet. The trunk of this tree is ten metres, or a little more than thirty feet in circumference at the base. At about a yard from the ground it puts out, on the south side, seven offshoots, which have grown into trunks as strong and vigorous as those of the other trees in the forest. Bent and gnarled at the bottom, these side trunks soon straighten themselves up and rise perpendicularly and parallel to the main stem. This feature is not, perhaps, wholly unparalleled, but another most curious fact is that the two largest of the side-trunks are connected with the principal stem by sub-quadrangular braces resembling girders. These beams have probably been formed by an astomosing of branches, which, common enough among angiosperms, is extremely rare among conifers; but it has been impossible to ascertain the manner in which the ingrowing of one branch into the other has been effected. The adaption by which a limb, originally destined to grow free and bear foliage, has been converted into a living stick of timber, is a strange one, and effords a new illustration of the power of nature to fit itself to circumstances. The space between the rough flooring formed by the growing together of the offshoots, at their point of departure, and the girder-limbs, is large enough to admit of building a comfortable hermit's hut within it.—*Popular Science.*

A TIE TEST.

M. Chevalier Drolet, of Canada, last season made a visit to Paris, for the purpose of impressing on the French government the superiority of Canadian timber for railway sleepers, so that they should be employed in the immense railway schemes the government has in contemplation. The forests that have heretofore been drawn upon for sleepers lie on the shores of the Baltic, in the Danubian principalities, and in Italy. The French government expected to be able to use 6,000,000 ties a year, and M. Drolet thought it would be an excellent scheme to supply this timber from Canadian forests. He took some samples with him, and showed them to the minister of public works, a series of tests being afterwards applied to the samples. The tests consisted of severe traction and crushing, and were pronounced satisfactory. M. Drolet was about to sign a contract to deliver 7,000,000 ties, when the government was frightened out of the railroad scheme by an article written by Leon Say, and the contract fell through. The question now is, whether the government will continue the railways eventually, or hand them over to the great companies. In either event M. Drolet thinks that Canadian ties are sure of a market in France. He bases this conclusion on the fact that he was compelled, on account of the lateness of the season, to decline a contract to deliver 370,000 ties at Bayonne to be used in the construction of a railroad in the north of Spain.

Tannin in Bark.

The *Lumberman* is in receipt of Forestry Bulletin No. 24, showing the amount of tannin in the bark of some of the trees in the United States. The highest percentage, 31.04, is found in mangrove, that grows on the gulf coast. Oak ranges from 5.99 to 16.46 per cent., the latter being for the bark of the chestnut oak of the Pacific coast. Hemlock varies from 13.11 to 15.87 per cent. The lowest in the list is the bark of the yellow oak that grows on the Atlantic coast. As the bulletin asserts that the figures given "do not indicate the real value of the bark of the species for tanning which can only be obtained by actual experiments made on a large scale, other properties of the bark, besides the percentage, affecting the value of the leather prepared with it," it is somewhat difficult to determine of what practical use they are.—*Northwestern Lumberman.*

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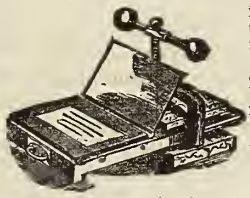

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PETERBOROUGH, Ont. MARCH 15, 1883.

REPORTS from Muskegon are to the effect that the crop of logs will fall very far short of the anticipated cut at the commencement of winter operations.

A chestnut tree in North Carolina was recently felled that was nine feet in diameter. It is estimated that it was a sapling when Columbus reached America.

THE Belleville *Intelligencer* says that a number of shanty men have returned home from the woods. They assert that the cut is very large and that the drive will be an early one.

IN North Carolina are 40,000 square miles of almost unbroken forests. In ten years from this time, it is estimated, these will be worth more than the present total valuation of that State.

The German Federal Council have assented to the increase of timber duties, proposed by Prussia, the new tariff being 30 pfennings and 70 pfennings on every 100 kilos of raw and sawn wood respectively.

ARKANSAS, it would appear, is not entirely devoid of large timber. A tree was recently cut in Hempstead county, in that state, which measured twenty-six feet in circumference. This would do as a companion to some of the large California trees.

AN Ottawa correspondent says:—Lumbermen are in capital spirits at the quantity of snow which is on the ground and the length of its duration. So favourable has the winter been for their operations that one team has been able to do as much as two last winter.

ABOUT 18 miles from the City of Mexico, on the road to Toluca, is situated a large area of pine forest, in which the growths are said to be as fine specimens as can be found on the American continent. No streams to float logs abound in the region, and it is thought that portable mills will have to be rolled on to cut the trees into lumber before it is removed. The American plan of constructing logging railroads would settle the question of transportation.

PETER LOUSCHER recently cut near St. Joseph, Wis., what is regarded the largest spruce tree ever felled in that region. It was designed for a vessel spar, and is 100 feet long and three feet through at the butt.

MR. JAMES BETHUNE, Q.C., of Toronto, who went to England a few weeks ago, has obtained permission to bring the case of McLaren *vs.* Caldwell before the Judicial Committee of the Privy Council. Mr. Caldwell appeals from the decision of the Supreme Court of Canada.

COMPETENT judges place the cut of Duluth, Minn., mills next season at 141,000,000 feet, and a correspondingly larger increase in the manufacture of lath and shingles. Comparing the log cut and the capacity of the mills it looks as though more mills were needed immediately.

THE lumber dealers of Chicago and Michigan City are protesting against alleged discriminations in freight charges by the railroads in favor of eastern and upper Michigan. They claim to be losing heavily in trade in consequence of the present tariff. The railroads are considering the complaint.

A KINGSTON despatch says that Messrs. Boyd, Caldwell and Co. are erecting a mill on the line of the Kingston & Pembroke Railroad, at Caldwell Lake and near Wilbur station. It will have a cutting capacity of 30,000 to 40,000 feet of lumber per day. The product of the mill will add materially to the freight of the of the railway.

The Campbellford *Herald* says:—A messenger from the woods informs a person who reports the matter to us, that at the shanties in the northern sections, the snow is six feet deep on the level. Shantymen need to study the trees they cut down to avoid accident or death, and it is sometimes "nip and tuck" work clearing themselves from the falling pines.

THE Emerson *International* says:—Wardrop & Co., one of our heavy lumber-dealing firms, have opened a branch lumber yard at Stephen. They will stock it with $5,000 worth of building material, and have commenced the shipment of stock, both by rail and by team. John Hewitt, who has been in the yard of the firm here, will have charge of the yard at Stephen.

THE *Lumberman's Gazette* says:—Washington Territory is destined ultimately to become a thriving hive of industry. A territory with 160,000,000,000 feet of standing timber within its limits, or sufficient to supply the present cutting capacity of all the mills in Michigan over forty years, with the continuously growing demand for lumber in this country cannot fail to become a prosperous and wealthy state, in the not very distant future.

A FINE stain can be imparted to furniture made of beech or pine in a very simple manner. Dissolve three ounces of permanganate of potash and three ounces of sulphate of magnesia in two quarts of hot water. Apply this to the surface of the wood with a brush, and repeat if necessary. The maganese salt is decomposed in contact with the fibre of the wood, and a fine, permanent stain produced. If the objects are small, a more dilute bath can be prepared, and the wood immersed in it for one or five minutes until it is thoroughly stained.

THE NEW YORK STATE PARK QUESTION.

The *Northwestern Lumberman* says:—The reservation of 600,000 acres of forest land in the Adirondack mountains, New York, by act of the legislature, to be perpetually devoted to sporting and sanitary purposes, does not entirely meet the views of lumbermen interested in that region. Below appears a communication from Mr. George W. Sisson, a mill-owner at Sissonville, near Potsdam, N. Y., and a prominent lumbermen in that part of the state, to a representative of his district in the legislature, which sets forth the views of lumbermen on the reservation question. The bill which Mr. Sisson opposed has passed, and hence, as an argument against it, his communication has lost its value but as setting forth the condition of the Adirondack wilderness, and the effect on its forests of lumbering operations, it is interesting and valuable. The last paragraph of the letter is very suggestive, and exactly "what's the matter" with other questions, pertaining to forestry and the lumber business, than the one considered by Mr. Sisson:

It is not a fact that the lumbermen by their operating do to any appreciable extent denude the forest of its timber so that the effect is seen in the flow of the streams or storage of moisture.

The timber cut for market is spruce and pine, and the hemlock, where the hemlock bark is accessible to a tannery, leaving untouched all the hardwoods—together with the tamarac, balsam, cedar, etc., which constitute by far the greater and prevailing portion of the forest trees. Ordinarily the lumbermen cut not more than 15 standard logs to the acre as an average, and often less. Mile-square lots, that average to cut that, are called good lots, and were it not for the occasional stumps and log roads, the timber removed would not be missed. It is folly to talk about of the lumbermen denuding the forest of timber. Where lumbering has been done eight or ten years the growth of timber has much more than replaced that which was cut. The only danger to be apprehended of forest fires, is from carelessness of sporting parties who have no interest at stake or property to suffer from their want of proper care in leaving camp fires.

There are in this, St. Lawrence county, several townships that have been entirely lumbered over for spruce and pine, and some of them the second or third time, and to-day they are well timbered with all the other native woods, in fact are well wooded lands, and furnish as great an amount of moisture, without doubt, as before an axe was struck on them.

Settlement has not followed to any extent in the wake of lumbering in the Adirondacks, neither is it likely to. If these lands had value for settlers' lands do you think the owners would have allowed so large an an amount of them to revert to the state for the small amount of taxes? One hundred years of lumbering has not worked up to the foot hills of the Adirondacks. The virgin forests still exists and is still the home of wild game in abundance—it is still as great a reservoir of moisture as ever.

It is known to lumbermen that spruce timber is dying to a large extent all through the forest, and many owners are cutting their spruce timber to save its value. Is it not for the interest of the state to have its citizens convert this spruce timber into its money value and give employment to workingmen, rather than have it become a total loss? besides these dead, dry trees endanger the remaining timber by increasing fire hazard.

I think the promoters of Senator Lansing's bill or other state park bills should take measure to prevent the construction of the Adirondack railroad through the wilderness, for the result of that would be to develop lumbering along its line, and a railroad though the woods would be quite likely to originate some forest fires and be of far greater damage than the present lumber interest.

The report shows the state to hold 600,000 acres of wild lands in ten counties. These isolated parcels of land, situated in 10 or more counties, will hardly form the nucleus of a state park, and cannot accomplish the object sought in the bill. It would require the purchase by the state from private owners of several million acres to join and connect together the parcels now held by the state. This I understand to be the plan, and I think there will be many land-owners who will be glad to pool their lands with the state for a bidder.

The demand for the passage of this or similar bills does not come from practical business men, but solely from theorists and gentlemen of leisure, members of sporting clubs and parties not in any manner competent to judge of the requirements of or advisability of what they ask for.

THE FORESTS.

The *Lumberman's Gazette* says:—The desirability of forestry commissioners in each state is fast forcing itself upon the attention of the people of this country. The rapid denudation of the timber in the country, and the entire lack of anything approaching systematic effort for timber cultivation, and the evil effects of forest removal, both in a climatic sense and in its influence on floods and drouths, has become apparent to escape the observation of those who have given any serious consideration to this subject; and hence forestry conventions have resulted and other movements have been set on foot, if possible to measurably relieve the evil effects of past injudicious legislative and other action. A national agricultural convention has also awakened to the necessity of action in this direction, and passed the following resolutions in behalf of forestry:

"Whereas, We begin to realize the lamentable wasting of the forest lands in the United States, and sad effects of their destruction upon the climate and water supply of the country, and we are forced to confess our need of the knowledge of the better management of the woodland than is now possessed by the people; therefore,

Resolved, That we urge upon the State Legislature the propriety of selecting judicious persons to act as state forestry commissioners, whose duty it shall be to instruct the people in regard to forest trees and their production and management; said officers to report annually upon the condition of the woodland in their respective commonweaths.

Resolved, That we beg of the agricultural colleges established under the land grant of congress, that they shall lose no time in planting state arboreta and establishing forest experimental stations, where all species adapted to the soil and climate shall be tested, and whence surplus seeds and plants may be distributed. Annual reports of these establishments to be made to the governors of the boards of agriculture.

Resolved, That congress be asked to establish one or more experimental forest stations upon the public domain, where the propagation and testing of useful trees shall be the leading object, with the collection of seeds and plants to be distributed by or under the direction of the United States agricultural department, to which bureau these stations should make annual reports."

The above recommendations deserve the thoughtful considerations of state governments and all of those interested in the future welfare of the country.

VERMONT TIMBER.

A correspondent of the *Northwestern Lumberman* writing from Montgomery Centre, Vt., says:—Spruce lumber stands without a rival in this section of the country for its adaptability for building purposes. It is used for square timber, studding, joist, rafters, outside boarding, inside sheathing, outside and inside casing, clapboards and shingles. The poorer, or third quality, is used extensively for packing boxes, for transporting dry goods, groceries, hardware, medicines, boots, shoes, etc. And here in the East there is no wood that is in so general use for butter packages; both in tubs and boxes. It has been in use in this country and vicinity, almost exclusively, for the past 50 years, and I think that the uniformly high quotations in Boston and other markets for many years past, of Franklin county, Vermont, butter (with St. Albans as the shipping point), is pretty good evidence of the excellence of packages when well manufactured for that purpose, for certainly no such prices could have been so uniformly obtained if the packages had not been of good material for preserving the butter. Many of these butter packages, amounting to millions in number, are annually shipped from the East to the South and West, while large quantities of sawed lumber are shipped to Massachusetts and Connecticut, and other places South.

For all the purposes that I have named, the durability of spruce lumber is all that could be desired, except for shingles, but for that purpose and others, where it is exposed constantly, or frequently, to moisture, as for fence posts, water conductors, etc., it is inferior to cedar, pine, tamarack, and some other kinds of timber. Perhaps it would not be out of the place here to say, that the spruce in this part of the country is rapidly disappearing. Everywhere

the lumber business is much more extensively engaged in than at any previous time, and I have no doubt that the prices now obtained are insignificant, in comparison to what they must be in the near future, if the business continues, even to the extent it is now being prosecuted.

Hemlock lumber is also being shipped quite extensively, as the bark is in good demand at remunerative prices for tanning, and the lumber, if not too far from the railroad, can be handled at a profit. Hemlock will, no doubt, come into more general use, as spruce advances in price, it being well adapted to many uses that the second and third qualities of spruce are used for. Basswood is also quite extensively used here for inside finish in buildings and for house-furnishing goods, and the bodies of sleighs, waggons, and in many other directions, it being a light wood, and not easily split or broken.

RESOURCES OF OREGON.

The resources of a country like this will be difficult to measure; for since it is new, its mineral resources probable are for the most part undiscovered. Enough is known, however, to say that Oregon is rich in iron, coal and timber. These three factors are certainly sufficient to make a state of immense wealth and population. Let the timber be removed from the country bordering on the Pacific ocean, as it will be to supply the greatly increasing demand of lumber for Australia, China, South America and Mexico, and there will be uncovered low hills and valleys all covered with excellent soil. To the capitalists and manufacturer of the east here is a good field. First, in the manufacture of lumber at the mouths of the logging streams; next, in bringing by a railroad running along the seashore from Coos bay on the south to Astoria on the north, carrying lumber from the shallower to the deeper outlets for export. One million feet of lumber per day is said to be the average now shipped from Puget Sound. Along the seashore of Oregon, and extending for twenty miles inland, there is an abundance of large hemlock, the bark of which is said to be much stronger in tannin than the Maine bark,

In short, here in Oregon, along the seacoast, there is a country rich in resources awaiting the development of the lumbermen, railroads, tanners, dairymen and small farmers, not yet taken up. Going east across the coast range of mountains there are a chain of valleys, the paradise of farmers, but now tolerably well settled. Going still farther east there is the Columbia river basin, the Ochoco and Kalamath counties, which are dry (but not too dry), unsettled as yet, inviting thousands of farmers and grazers to come and make for themselves homes.—*Portland (Oregon) Letter to Washington Star.*

THE CHESTNUT IN ITALY.

Sig. Schira, Inspector General of Forests, in an interesting report, says among other things that the famous chestnut tree on Mount Etna, which still lives, measures 64 metres in circumference at its base. Its age is estimated differently—some attribute to it 4,000 some 2,000 years, and recent studies give it 660 years. There are some other famous chestnut trees in Italy, notably one in Montamiata, in Tuscany. The deplorable custom of late years to destroy the forests has deprived Italy of many noble chestnuts, but it is to be hoped they will be protected by the new scheme of the Minister of Agriculture for re-wooding the denuded mountains. In the north of Italy the chestnut grows at an altitude of from 400 to 900 metres above the level of the sea; in sunny situations even at 1,200. In the south the zone of growth is between 500 and 1,200 metres above the level of the sea. Almost all the Italian provinces cultivate the chestnut, these trees occupying the total superfice in Italy of about 496,114 acres. The most are found in the provinces of Lucca, Sondrio, and Genoa. In Lucca, for example, 181.52 per thousand acres of the territory are occupied by the chestnut. The total annual produce of chestnuts (fruit) is about 5,768.436 quintals. Those of Cuneo are best both for quailty and quantity. The exportation is about 70,000 quintals, at a profit of about 2,000,000 francs. There are several methods of preserving the fruit—from sugaring the chestnuts to slightly boiling and then drying them, or laying them, when newly gathered in November, among perfectly dry sand in vases, and burying the vases in dry earth, when they will remain fresh and good till next June.

FLOODS IN THE STATES.

The Buffalo *Lumber World* says that a person of an imaginative turn of mind might be easily convinced that the elements were leagued together this season to harass, impede and embarrass as much as possible all who are engaged in the production and sale of lumber, or that the water sprites had determined to avenge the unceasing injuries done to their protectors from time immorial, the forests. Within the last month a great deal of damage has been done in various sections of the country by floods, more particularly along the Ohio valley and in the states of Ohio and Pennsylvania. The lumber business has probably suffered as much as, if not more than, any other. Cleveland lumber yards lost 23,000,000 feet of lumber and 15,000,000 shingles, the pecuniary loss to lumber dealers in this city alone being estimated at nearly a quarter of a million dollars. In other localities, saw mills have been swept away, lumber scattered broadcast over miles of flooded territory and general property destroyed wholesale. Several towns have been almost utterly ruined by the floods, though happily the loss of life has been comparatively small. In the lumbering districts of the northwest, on the other hand, the snow has been so deep in many localities as to impede logging operations to quite an extent. In now appears probable that the cut will fall a little short of what was anticipated at the beginning of the season, but doubtless logs enough will be banked to keep the mills busy during the season, together with those that have been held over.

SPRUCE IN ENGLAND.

The *Timber Trades Journal* of February 24th says:—That in the first week of the past month spruce deals touched their lowest cargo limit in the market is now pretty evident. Why they should have, since November last, so suddenly fallen in value is inexplicable, unless the theory be admitted that a scare is, in itself, a sufficient cause for some large holders of stock to press their goods to a sale at the risk of serious loss. Doubtless towards the close of last year orders were getting scarce; and the reduction made in price possibly had the immediate effect of passing some amount of wood into consumption which might otherwise have laid for a time at the ports. Unfortunately, the disturbing effects which result from excessive fluctations of prices are not always confined to the area immediately affected by them. Without doubt, the sudden and extensive fall in the value of spruce, approximating to some 12 per cent., had a most disturbing effect upon Baltic goods. We can now see that there did not exist any sufficient reason for the scare—for such we are disposed to designate it—and the probability rather is that the spruce market will quickly resume—or at any rate very nearly resume—the position it held at the commencement of the last quarter of 1882.

Pruning Trees.

In a recent French work on the philosophy of pruning the following rule is given: "The system is based on the fact that, as wood is formed by descending sap alone, a wound made on a tree can only become covered with healthy new wood when its entire surface is brought into connection with the leaves by means of the layer of young and growing cells formed between the wood and the bark. To make this connection it is necessary to prune in such a manner that no portion of the amputated or dead branch shall be left on the trunk. The cut should always be made close to and perfectly even with the outline of the trunk, without regard to the size of the wound thus made. This is the essential rule in all pruning, and on its observance the success of the operation depends."

Maple Sugar.

The sugar bushes of Vermont and western Massachusetts have changed considerably in aspect within fifty years. Formerly the iron kettle was the apparatus used for reducing the sap. The big fire of logs and limbs under the kettle would particularly on a windy day, fill the boiling sap with ashes and cinders, which, coupled with the rust on the iron, produced a rich, dark color in the syrup. To get the "settlin's" out, or make the "skimmin's" rise in order to scoop it off, milk, and sometimes eggs well beaten together, were poured in, only to burn black and make more "settlin's." The straining of the sap, the improved evaporators, and the arch of the present day were unknown. But it was not the custom then to melt up old sugar, flavor it with fresh boiled sap, and sell it for first-class new sugar, as is done by the wholesale at the present day. The sugar-making season of 1883 is expected to be very profitable.

THE TIMBER OF IDAHO.

The *Wood River Miner*, of Hailey, Idaho, thus describes the timber of that region: Pine timber is abundant on all the high mountains of the Wood and Salmon river region. Just about Hailey, at the base of the mountains, there is but little; but beautiful tongues of evergreen forest run down the mountain side three miles further up, and from Warm Spring creek, 14 miles above Hailey, through to the British possessions, is almost one unbroken forest. The best timber for mining purposes is the red fir, which is very strong and tough, and grows mostly in the lower hills. Up higher in the mountains predominates the black pine, better adapted for charcoal, cordwood, etc. Some spruce and white or balsam fir, with the red fir and black pine, comprise about all the species of the conifers growing in this section. The cottonwood, alder and quaking asp grow along the streams. That paper further says there are no Indians in the entire Wood river country, and the prospector or settler is as safe from their depredations there as he would be anywhere along the Ohio. Extensive planing-mills are wanted at Hailey. There is a vast and rapidly increasing consumption of lumber, and no planing-mill within 140 miles.

WORTH KNOWING.—A Fact Worth Knowing. The best household remedy known for Coughs, Colds, Bronchitis, Asthma, Whooping Cough and all throat and chest troubles tending toward Pulmonary Consumption is Hagyard's Pectoral Balsam, to be procured of any druggist.

WALTER LINTON, of Waterloo, writes that Hagyard's Yellow Oil has done great good in his family, his wife being cured of Callouse lumps that other medicines failed to remove, he he also states that a neighbor was promptly relieved of Rheumatism by the same remedy.

MR. THOMAS W. RACE, Editor and Proprietor of the Mitchell *Recorder*, writes that he had a prejudice against Patent Medicines, but being induced to try Burdock Blood Bitters, for Billiousness that occasioned such violent headache and distress as to often disable him from work. The medicine gave him relief, and he now speaks of it in the most favorable terms.

MINNESOTA
PINE LANDS
FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF
8,000 ACRES
Of PINE LANDS, in St. Louis County, Minnesota, carefully selected and estimated to cut **FORTY MILLION FEET**, well located on good driving stream, tributary to Duluth.

A. McCALL,
6L1 Lumber Merchant, Simcoe, Ont.

320 ACRES FREE
IN THE
Devil's Lake, Turtle Mountain And Mouse River Country,
NORTH DAKOTA,
Tributary to the United States Land Office at
GRAND FORKS, DAKOTA.
SECTIONAL MAP and **FULL** particulars mailed **FREE** to any address by

H. F. McNALLY,
General Travelling Agent,
St. Paul, Minneapolis and Manitoba Railway,
2m **28 E. Front Street, Toronto.** L2w3

Wanted to Purchase.
LARGE QUANTITIES OF
CLEAN
SPRUCE and PINE
One foot Long and upwards; three inches thick; three to seven inches wide.

S. J. MORELAND,
LUMBER IMPORTER,
And Manufacturer of all kinds of Safety Paraffin and Vesuvian Matches.
GLOUCESTER, ENG.
February 20th, 1883. 3t6

PUBLIC NOTICE
J TRADE MARKS. TESTED
Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.
J And Beam Engine Marks.

It having come to the knowledge of Messrs. Thomas Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of J and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.
Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,
EAST PARADE,
SHEFFIELD, ENGLAND,
Solicitors to the said 6L3
THOMAS JOWITT & SONS

VALUABLE
TIMBER LIMITS
FOR SALE,
Situated in the Nipissing District.

The following very desirable limits will be offered for sale at Public Auction (if not previously disposed of) at the
Grand Union Hotel, Ottawa, Ont.
—ON—
TUESDAY, 24th Day of April, 1883,
At 2.30 O'CLOCK IN THE AFTERNOON.

Berth No. 23, Nipissing.....36 square miles
do 43, Georgian Bay.....36 do
do 51, do .....36 do

BERTH 23 is heavily timbered and is very favourably situated for lumbering. The Canadian Pacific Railway crosses the south-west corner of the limit, and parties desirous of manufacturing lumber for shipment to Manitoba and the North-West would find this an excellent opportunity for establishing such a business. There is said to be a good mill site on the berth, with good facilities for piling and for shipping either west or east.

BERTHS 43 and 51 are adjacent limits, conveniently located for getting logs into Georgian Bay.

The terms and conditions of sale will be made known at the time of sale.

Further particulars may be had on application to Mr. W. H. Rowley, Manager of the Merchants' Bank of Canada, at Ottawa, Mr. Wm. Cooke, Manager at Toronto, or to

R. C. W. MacCuaig,
Auctioneer, Ottawa.
February, 28th, 1883. 3L6

FORESTRY IN MICHIGAN.

The following paper by V. M. Spalding, Ann Arbor, Mich., was read at the meeting of the American Forestry Congress, at Montreal:

It is not necessary to go into an argument to show that Michigan ought to be interested in forestry. Everyone knows what an element the forests have been in our prosperity. According to a late report of the Commissioner of Immigration "the aggregate value of the forest products of this State already mentioned is largely in excess of $8,000,000," and the timber product of a single year, 1879, amounted to $60,000,000, or about thirty-five per cent of the total value of the natural productions of the State for that year. Michigan produces more salt than any other State in the Union, and the brine is evaporated by means of the refuse from the great saw mills in the vicinity of Saginaw and other lumbering towns. Ours is the second State in the production of iron, and the blast furnaces of Ironton, Elk Rapids, and a number of other places are drawing the supply of charcoal for its reduction from the great hardwood forests in their vicinity. The products of these forests are sent to the ends of the earth. Much of the first lumber of the Atlantic cities and of the Old World comes from Michigan pineries. Threshing-implements, furniture and a long list of articles requiring wood in their manufacture are made in the state and exported from it, their manufacture being a source of support to fifty thousand of our people and their sale a steady source of wealth to the State.

Nor is it necessary to repeat the well-known fact that our forests are rapidly disappearing. The bulletins of the last census, accessible to everyone, show that the estimated amount of merchantable pine timber standing in Michigan May 31st, 1881, was thirty-five billions of feet. At our present rate of consumption, five billions of feet annually, it will take seven years to use up our pine forests. Suppose, however, that the estimates of the amount remaining, although made with great care, are too low; suppose for safety the pine will last twice as long as has been estimated, the fact still thrusts itself upon us that in a few years this great source of our wealth will be gone.

What are we doing in view of these facts? We are going on with astonishing energy and improved machinery to hasten the end. Every man who can do so is trying to get a piece of pine land, or a quantity of logs before they are gone, and our own people, in company with eastern capitalists, are planning the speedy destruction of the hardwood forests as soon as the pine lands have been stripped. The newspaper articles that charge this thing upon us are not sensational. They do not tell all the truth.

We have squandered with reckless haste the abundant forest wealth with which the State was endowed, and, besides all this, time and again, forest fires, that might have been prevented, have swept over fair portions of the commonwealth, carrying swift destruction with them and completing the work that the axe had begun.

In the study of this subject then we may as well turn our attention at once to the forests of the future, for it is evident that those of the present will be gone in a few years. Our own legitimate wants and the great profits of lumber trade have already settled the question for Michigan. If we want forests we must make them.

Without repeating the arguments that have been given so fully by others, I shall assume, what is admitted by everyone who has bestowed erious thought upon the subject, that the highest welfare of the State requires the establishment and continued maintenance of a suitable proportion of wood-land. It may be assumed, too, that, in due time, both Government and people, moved by necessity, if by no higher influence, will unite in a settled purpose to secure this. Bs soon as this attitude is taken by the people of the State, and we are ready to enter upon the work of reforesting, we shall find ourselves face to face with various difficult problems. Some of us, perhaps, may render a service by studying these problems now, viz.:—

(1) What parts of the State and what portion of its area should be covered with forests?

Economists estimate about twenty-five per cent. as a suitable proportion, but this varies with the position, physical character, and commercial interests of the State or country under consideration. The State of Michigan contains large areas that are worthless for any other purpose than raising timber, and still more extended regions that, if not absolutely valueless for agricultural puposes, can be used to far better advantage in growing trees than in raising any other crop whatever. Undoubtedly, the great question with us is, how, in the most direct practical way, can we rehabitate the entensive regions in the central and northern parts of the lower peninsula that have been stripped of their pine forests, and the remaining portions of this region that will so soon be bare? Anyone that has been through this part of the State will remember its desolate and ruined aspect. "The valuable trees were all felled years ago, and the lumberman moved on to fresh spoils, leaving behind an inextricably confused mass of tree tops, broken logs, and uprooted trunks. Blackberry canes spring up everywhere, forming a tangled thicket, and a few scattering poplar, birch, and cherry trees serve for arboreal life, above which tower the dead pines, bleached in the weather and blackened by fire, destitute of limbs, and looking at a distance not unlike the masts of some great harbor. Thousands of such acres, repellant alike to botanists and settler, can be seen in any of our northern countries."[Erwin F. Smith, "Flora of Michigan."] While there is good soil to be found in this region, much of it is light and sandy, altogether unfit for farming purposes, but it has raised one of the finest forests that ever clothed the surface of the earth, and if it can again be covered with such a forest it will become in the future, as it has been already, a source of almost unlimited wealth.

Another portion of the State will soon force itself upon our attention, unless it is cared for. All along the eastern coast of Lake Michigan sand-dunes extend, precisely similar in their nature, though of less extent than those of the Old World. While these dunes are covered with vegetation they keep, for the most part, within their limits, but indications of what they may do, when free from such control, may be seen at Grand Haven, Michigan City, and other places along the shore, where piles of fine drifting sand are covering railroad tracks, and fences, and some trees, and, in some localities are encroaching upon cultivated fields, to the dismay of their proprietors. The experience of Western Europe is conclusive upon this point, and it is the manifest duty of the State, and of the people, to absolutely prohibit and prevent the clearing away of trees, or even excessive pasturage of such lands, and to encourage by every suitable means, their reforesting.

The farming lands in the southern portion of the lower peninsula all need a fair proportion of woodland for fuel and shelter, and the great majority of these farms would be rendered much more valuable in a few years by judicious plantations of trees; so, also, the northern peninsula, though still heavily wooded over large areas, already has extensive regions that have been stripped of their forests, and that can be turned to better account for this than for any other purpose. We may safely conclude, therefore, that the State of Michigan requires fully as great, and probably a greater proportion of its area to be kept in wood-land than has been estimated as necessary for other countries; in othe words, more than twenty-five per cent. in this State, rather than less, may properly be covered with timber.

(2) What kinds of treess shall we plant?

To answer this question we must know something about the different species of trees, the soil and climate to which they are adapted or to which they can bo induced to adapt themselves, what kinds will endure unfavorable conditions best, what trees will grow rapidly, and what sorts are most valuable for timber or other products.

Without attempting to decide all of these questions in detail—many of them requiring not only careful study but long experiment, for which the State makes no adequate provision, as yet—there is one very important question suggested at the outset, and that must be met, whether it can be settled at once or not. The question is, how much significance must be attached to the principle of rotation? It has been commonly noticed that forests of oak succeed those of pine, and *vice versa*. Oak and hemlock forest have been succeeded by those of elm, beech and maple. When the pine woods in the northern part of Michigan and Wisconsin are cut off, poplars, birches, and the red-cherry spring up, and so, as in many cases, this succession seems to be pretty uniform and constant. There has grown up a half popular, half scientific notion that it must be so, and that, if we are to succeed in reforesting our denuded pine lands, we must follow the order of nature. We have no right, however, to follow nature blindly, and sometimes we can take a short cut while nature is going around a corner. No one has ever formulated an order that governs the succession of forest trees, nor has it ever been shown that there is any such unvarying order of succession. On the contrary, it is one of the most variable things with which we are acquainted, and there is every reason for believing that it depends more upon what the ground is seeded with than anything else. The reason why birches, poplars, and red cherry spring up on our wasted pine lands is that the seeds of these species are carried there by the wind and by the birds, and there is no doubt whatever that other and better trees may, with suitable pains, be made to take their place. When we plant trees about our houses, or along the highway even, if it happen to be new land, we do not stop to make a critical inquiry into the laws governing the succession of forest trees; we find out what trees are hardy, and having settled this point, set out whatever kinds we fancy with the expectation of having them do well if they are cared for.

(3) Shall we plant the white pine in Michigan?

The answer may be given without hesitation. Yes; plant it first, and last, and all the time. Give it a fair chance and it will cover the State again. It may be wisdom to substitute some other species on those tract that have just been covered with a heavy growth of pine, but it is, to say the least, doubtful whether any such distinction need be made. If the white pine were planted in Michigan universally and everywhere where the land could be spared, it would find congenial soil enough even in those counties that have been most heavily covered with it.

Without discussing the value of other well-known species a few may be mentioned as specially worthy of planting in Michigan. The European larch, famous for the durability of its timber, and perfectly adapted to our northern climate; the *Ailanthus*, the only tree that has successfully controlled the drifting sand plains of southern Russia, and will perhaps be more valuable than any other on our own sand dunes; the *Catalpa speciosa*, of which specimens a foot and a half in diameter may be seen in Ann Arbor, and which, probably, may be depended upon for hardiness throughout the southern portion of the lower peninsula; the white ash and a long list of indigenous trees, any of which may be planted with every reason to expect a good return. The consideration of the large number of species, both indigenous and introduced, that may be successfully cultivated in Michigan is of great importance, but requires too much space for this article, and will have to be taken up in a separate paper, together with the consideration of the species best adapted to our sand-dunes, and the methods to be employed in planting them.

(4) Admitting that it is desirable that the planting of trees in Michigan should be undertaken at once and in earnest, what are the means of securing this and of ensuring the best results?

(1) The Legislature of the State may promote the work by offering encouragement to tree planting in the way of exemption of property from taxation. As to the form of legislation and its practical details, a careful study of the action of other States will furnish valuable suggestions. Of all State laws on the subject of tree planting that have come to my notice, that of Iowa has seemed preminently adapted to the purpose. The law provides that "for every acre of forest trees planted and cultivated for timber within the State, the trees thereon not being more than twelve feet apart, and kept in a healthy condition, the sum of one hundred dollars shall be exempted from taxation * * for ten years after each acre is so planted, provided, etc." Possibly other forms of legislative action on this subject may be found better, but that of Iowa has this very excellent feature, that it has very largely accomplished the object aimed at. We can profitably follow the example of Iowa, too, in securing the preparation and distribution of something corresponding to their "Forestry Manual," an unpretentious pamphlet of about thirty pages, filled with valuable information and practical hints on the subject of tree planting, and distributed gratuitously among the farmers of the State.

(2) The State ought also to be establishing facts upon which to base the future management of the great work of reforesting its waste lands. Two or three experimental stations, located in as many parts of the State, where trees of all sorts, both native and foreign, can be cultivated and the results recorded, would enable us in a few years to demonstrate the usefulness of some kinds and the unfitness of others for general cultivation. Meteorological observations carried on at these stations would give data for the solution of the difficult but important question relating to the climatic effects of forests.

(3) Very much depends upon the railroad companies, owning as they do, in the State of Michigan, lines aggregating over four thousand miles in length, with large grants of valuable land, they control, in a very great measure, the agricultural and commercial interests of large areas of the State. The Detroit, Mackinac & Marquette Railroad alone owns over 1,300,000 acres of land, and the Flint & Pere Marquette, the Grand Rapids & Indiana, and other lines are possessed of large tracts of both farming and timber lands. An abundant supply of wood for ties and manufacturing purposes is a prime necessity of all these lines, and may be secured by the prompt adoption of a liberal and enlightened policy in maintaining or restoring a suitable amount of forests on their lands. A number of western railroads, though obliged to contend with great natural disadvantages, have taken hold of this work with great enthusiasm, and several of them are now employing paid foresters to direct the work of raising and caring for forests along their lines.

(4) The farmers of the State have very much to do with the future of our forests, and, unfortunately, they have not yet, as a rule, taken a practical interest in maintaining or restoring them. There is, however, no class more ready to enter into undertakings that promise to be productive of good, and none more accustomed to meet and overcome difficulties. When the farmers of Michigan are once possessed with the conviction, that trees are often far more valuable than any other crop, and that they render the farm more productive and worth more per acre, trees will be planted.

(5) A few at least of the educational institutions of the state can do an important work by giving forestry an honorable place among the subjects of their respective course of study. Whether there is as yet a science of forestry in the United States or not, there will be before long, and intelligent and interested action on the part of such institutions will aid greatly in establishing the science, and in gaining for it the confidence and encouragement of both government and people. A beginning of this kind has been made at the University of Michigan, in connection with the School of Political Scieuce recently established there, and the lectures on forestry are attended by a class of about fifty.

(6) The general Government still owns something over a million acres of land in Michigan, and the State Government has yet large tracts of land under its control. If, instead of throwing this away, or selling it at the rate of $18 per 160 acres, any considerable portion might by auy means still be kept in permanent forests under Government control, and this control be exercised wisely and for the public good, as is done in the State forests of the Old World, forestry in Michigan would become an established fact. In some or all of these ways it is to be hoped that the great work of restoring the forests of the State may be accomplished.

Subscribe for the CANADA LUMBERMAN.

Chips.

THERE is an elm tree growing at Canton, N. Y., between seven and eight feet in diameter.

AT Palouse Junction, on the Northern Pacific railroad, W. T., there are piled 600,000 ties and 36 miles of rails.

SOME of the lumber camps in the vicinity of Port Severn are breaking up on account of the great depth of snow. It is about 3½ feet on the level.

THERE are produced annually in North America 100,000 barrels of hemlock bark extract, of which a single Boston firm produces 72,000 barrels.

A WEST Virginia farmer recently sold a single black walnut tree for $600, which was but little less than the sum he paid for the tract on which it grew.

A PETITION has been presented to the Manitoba parliament from vessel owners and lumbermen, praying that the mouth of the Red River of the North be dredged and lighthouses erected for the benefit of navigation.

THERE is a pine tree in Montgomery county, Mich., the owners of which are offering $140 to any party or parties who will deliver the butt log in Alpena. The tree is over nine feet in diameter, and it is thought to be largest tree in the state.

THE Montreal *Gazette* says:—Not only is there an enquiry from American markets, but we hear of orders being received from Winnipeg at good prices. The local market rules quiet, a fair business having been done in both hard and soft wood.

THE *Northwestern Lumberman* says that the Puget Sound Iron Company has 70 men engaged in cutting wood on the Sound, to be made into charcoal, and the force is to be increased to two hundred. Two-thirds of the men are Chinamen.

WE learn from the *Northwestern Lumberman* that a patent has been granted to Mr. Westman for a new method of erecting portable houses, designed for Manitoba. The inventor covers a round, wooden frame with rope made of prairie grass, and chemically made incombustible.

LOCUST is a valuable wood for many purposes, and is employed in heavy work on account of its strength and durability. It is used in shipbuilding and mill cogs largely. Locust fence posts are said to have been known to remain in the ground 60 years, continuing perfectly sound.

VERY few ties or other forest produce are being got out in Haliburton. The snow is too deep and the price too low. Cordwood is paying better. Sound two foot wood delivered in the village realizes $1.25 per cord. This is an artificial price, and is owing to the deep snow. There must be nearly four feet of snow in the woods.

GEORGIA exports over 300,000,000 feet of yellow pine annually. The principal exporting points are Brunswick, Darien, Savannah, St. Marys and Satella. Brunswick comes first with about 135,000,000 feet, principally resawn lumber. Darien's specialty is timber, of which about 100,000,000 feet was exported last year from this port. The balance was divided mainly between the other three ports.

A correspondent of the Montreal *Gazette* says lumbering seems to be the principal business of the people at Eaton Corner, clapboards, spruce logs, basswood and birch being $6 per 1,000 feet, board measure, at the Cookshire Mill Company's mill, and the company cannot saw the lumber nearly so fast as it comes in to their mill. The company have also contracted with a party up the river in Newport for 300,000 feet of spruce lumber, and with what they buy of individuals they will be able to run their mill to its full capacity.

NEARLY all the fine cabinet woods in general use are imported via New York and New Orleans, but there are many varieties of Australasian woods that do not reach New York, but are occasionally brought into San Francisco. Of these are the "prima vera" or white mahogany, the toa wood, resembling rosewood, and the manoa wood, all of which are very beautiful cabinet woods, but very expensive. They are somewhat used in California, but rarely find their way eastward.—*American Furniture Gazette.*

THE New York correspondent of the *Northwestern Lumberman* says in regard to eastern spruce that there is really no change to note. Some scattering cargoes are arriving. St. John, N. B., is likely to forward some supplies before long. But there is no demand just now to call for the moving of any large stocks.

M. FAVOL, a French investigator, has found that the creosote treatment for the preservation of wood sometimes doubles the durability of oak timbers used in colleries, but has little influence on pine. He further says that oak prepared with ferrous sulphate last 10 times longer than in its natural state. It should be immersed 24 hours in a solution of 200 grammes of ferrous sulphate.

THE prospective valve of southern pine land says the *Tradesman*, is well illustrated by two transactions recently made by Mr. Van Kirk, of Pensacola, Fla. At about the same time he sold 35,000 acres of Florida pine lands for $1.25 per acre, while for 110,000 acres of Wisconsin white pine lands, estimated to cut the same amount to the acre, he received $21 to the acre. Yet the Florida lands are as near transportation and as accessible as the $21 Wisconsin lands.

THE *Northwestern Lumberman* says that last season D. W. Goodenough handled nearly 5,000 cords of hemlock bark, at Ludington, Mich., and thereabout, and this year he expects the amount hauled by him will reach 6,000 cords. The larger portion will be gotten out along the Manistee branch of the Flint & Pere Marquette road, mostly in the township of Freesoil. Farmers clearing their land make a good thing on the bark, the stripped logs being clear gain.

MESSRS. JAS. AND WM. DEMPSTER, of Gananoque, are actively engaged in their lumbering operation in the Township of Canonto. They have a large gang of men and teams at work; and have now 15,000 standard pine logs ready to run out as soon as navigation opens. The timber is first growth and of best quality; the logs will be taken to Gananoque by way of Kingston. In addition to the saw-logs Messrs. Dempster Bros. are cutting a lot of other timber for rafting and railway purposes.

THE Singer Manufacturing company of South Bend, Ind., is making an immense amount of veneered work. At least two-thirds of the tables and cases turned out are veneered, the veneer being walnut, principally, and the basis pine. It is much the cheaper way, considering the high price of good walnut. Two thicknesses of pine are used, cross-grained in order to prevent splitting. Butternut and cherry are also used to some extent. The factory gives employment to 1,500 men.

A CORRESPONDENT of the *Northwestern Lumberman* writing from New Lexington, Ohio, says:—We had formerly good oak, poplar, walnut, ash, hickory, butternut, sycamore, chestnut, black oak, beech, birch, hard and soft maple, but now there is no lumber made to be shipped from here. D. C. Fowler has the only stationary mill in this vicinity, and it does not run more than a third of the time. There were formerly mills on all the creeks and runs with sufficient water, but they have all departed this life. Since the advent of circulars and portable engines, nearly every section of land has had one or more "sets." Timber has been recklessly destroyed, until Perry county is not a timber county, but large amounts of lumber are shipped in for building and fencing purposes.

TRADE IN THE STATES.

The Chicago *Northwestern Lumberman* says: The most marked feature of the lumber trade for the week past is an increased activity in the middle sections of the country, north of the Ohio and east of the Mississippi, with encouraging reports from the East and the heralding of good prospects at the West. The actual revival of demand in Ohio, Indiana and Illinois, wherein the long, hard winter has, to a considerable degree, let go its grip, is like a rebound from the extreme stagnation that prevailed after January came in. It is cheering, as showing that the actual demand for lumber is now, and gives prospects of being, large, and that the current requirement during the winter was simply arrested by the severity of the season. It is proof that much of the clatter about the shrinkage of demand on account of alleged hard times and forebodings of the future has had more sound than real significance, that the industries of the country are still expanding, that the mass of the people are yet prosperous, that real estate is being improved, railroads and manufactories built—in fine, that the progress of this great country at large has not been arrested, and that the consumption of lumber is going right on despite the lugubrious croaking of reactionists. While the foregoing is a fact, it may be, doubtless is, true that, in consequence of the prodigious output of lumber last year, there may be placed on the market this spring an aggregrate stock somewhat in excess of the immediate requirement, which may tend to cause prices at the season's opening to rule a little lower than they did last year. In fact, the decline in assorted yard stocks has already been felt, especially at the West. To what degree the value of bulk stocks will be affected by this weakness in the trade remains to be seen later on.

FELLING A REDWOOD.

In felling a redwood tree it is necessary to be careful to have the way cleared for it to drop, as the wood is so brittle that much of a shock is apt to break the trunk square off. The woodman will hold his axe like a plummet, and squint upward to ascertain how nearly perpendicular the huge tree may be, due allowance being made in cutting for any divergence therefrom. Logs are often dragged along to fill gullies, knolls must be levelled and stumps removed. Mortise holes are first cut in the trunk about four feet from the ground, into which iron-shod spring-boards, about four feet long and six feet wide, are fixed for the men to stand on while chopping at a height too great to reach from the ground. In this way the undercut is made, the strokes being made with great force and precision from the rather dizzy perch. In the neighborhood of an hour the choppers will reach the heart of a big tree, from which point new and more scientific tactics are adopted. The trunk must be laid exactly on a line with the course that has been cleared for it, to prevent injury to it. By very careful sighting and calculating, and masterly execution of plans laid out, the men are able to drop a tree right where they want it, to a dot, and seldom miss their mark, so great is the dexterity acquired. Measurement is made from the end of a lath pointed directly along the line where the trunk is to be laid, to each corner at each side of the undercut, and a little chopping is done to make the angles jibe. The mathematics of the case, though not especially complicated, are about sufficient to place a professor in his element. After the undercut is properly arranged, new mortises are made behind the tree for the spring-boards, and the overcut is made by a two-handed saw. The last few strokes are a delicate piece of business, the ax finishing the job, and the tree falls true and straight.

Salt and Woodwork.

It is a curious fact, says the *Carpenter*, that in the salt mines of Poland and Hungary the galleries are supported by wooden pillars, which are sound to last unimpaired for ages, in consequence of being impregnated with the salt, while pillars of brick and stone, used for the same purpose, crumble away in a short time by the decay of their mortar. It is also found that wooden piles driven into the mud of salt flats and marshes last for an unlimited time, and are used for the foundation of brick and stone edifices; and the practice of docking timber after it has been seasoned, by immersing it for some time in sea water, is generally admitted to be promotive of its durability.

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

25 in ball and 5 in heel are the numbers usually required.

PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

T. McAVITY & SONS,

Dealers in Lumber and Mill Supplies,

ST. JOHN'S, N.B.

3L6

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills

L7tf

Market Reports.

MONTREAL.

From Our Own Correspondent.

March 10th.—Owing to the state of the roads preventing much haulage, the spring trade is rather longer in opening up than what is usual aud we have no change to make ou our prico list. We hear, however, that dealers in Ottawa are asking higher prices for their lumber, but we have not heard of this being exceeded to, as stocks there are likely to be full and lumbermen are getting out logs beyond their expectations. The Americans are beginning to arrive and pick up suitable lots. We may state that although we do not change quotations, prices are very firm as under, ex-yard :—

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

Trade has been pretty active during the past two weeks and stocks are ample for all requirements as both the Q. M. O. and the G. T. Railways are bringing in large quanties of fino long wood. Prices have a downward tendency and some of the dealers are accepting a shade under our quotations—the market being decidedly weaker. We quote at railway stations :

Long Maple	$ 7 50
Short "	7 00
Long Birch	7 00
Short "	6 00
Long Beech	6 50
Short "	6 50
Long Tamarack	6 00
Short "	5 50

OTTAWA.

From Our own Correspondent.

March 9.—There is one class of tho community who takes little stock in Wiggin's storm, and that is—the lumbermen. While tho prophet has issued his fiat advising those interested in shipping and other business pursuits to keep "close to the shore" from the 5th to the 11th instants, he has not said anything of tho lumbermau. Perhaps there was no necessity, as the hardy hewer of our forests is quite safe from the disastrous elements.

There is little of importance to announce concerning the trade this month. Everything is progressing smoothly in tho limits, and a good season's cut will be the result. There is every prospect of the output this year being fully as large, if not larger, than last season.

As yet this session there has been little legislation in the Commons concerning the lumbering industry.

Messrs. Hugo B. Rathbun, Edward Wilkes Rathbun, and Fred. S. Rathburn petition Parliament to be incorporated as a company to bo known as "H. B. Rathbun & Sons." Tho powers asked for are to carry on in Canada, Great Britain, the United States and elsewhere, the business of general merchants, including the sale of lumber and timber, general manufacturers, ship and vessel owners, etc. The principal place of business of tho company will be Deseronto.

G. H. Nichols and Charles Kyto, of New York, A. F. Riddell, of Montreal, W. A. Allen and J. H. Haycock, of Ottawa, ask for incorporation as the "Dominion Phosphate & Mining Co." Capital stock will be $150,000. Head office will be in this city.

NOTES.

Mr. Oliver Latour, a well-known lumberman of this city, has gone to Winnipeg on a business trip. He is interested in certain limits in Lako of the Woods district.

The improvements going on at the mills here this season are more extensive than in previous years.

The last heavy fall of snow on the Upper Ottawa has interfered considerably with work in the shanties.

TORONTO.

From Our Own Correspondent.

March. 10.—Business at the various yards is in a fairly prosperous condition and most of the dealers seem to be in the best of humor, and are looking confidently to the opening of the spring trade, which will undoubtedly be good, should no unforeseen circumstances arise in the meantime to mar the present prospects. Last spring the prospects were just as promising up to the time of the carpenters strike, and should the bricklayers take tho same course this season, which has been threatened during the last week, the same lamentable results will certainly bo the outcome of of such a suicidal act.

The continual blocking of the different railways leading into the city is keeping lumber back, so that the wholesale trade by car-loads is nearly at a stand still, and our harbor is tightly blocked up with ice, the prospects for the early opening of navigation being extremely doubtful which will certainly tend to strengthen prices, on early shipments, at least. By my quotations this week you will notice that prices on some grades have stiffened, and remain firm on all grades of lumber.

QUOTATIONS, FROM YARDS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@45 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$57 00@64 00
Pine, fourths	53 00@57 00
Pine, selects	48 00@52 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

BOSTON.

Cotton, Wool and Iron of March 10, says :—Considering the exceedingly unfavorable weather, trade is moving along quite encouragingly and is gradually improving. There are further indications that spring business will be of very good proportions, including new building operations in the city, suburbs, and in fact all around. The northern mills that supply house frames are quite busy on orders. Advices from down east are that the winter has been very favorable for logging operations. Shingles begin to be called for. Western lumber is in considerably broken stock in first hands, and trade is looking up. Black walnut of the best grades is in good enquiry, and the best oak, ask and cherry are particularly in request for furniture work and inside finishing. Yellow pine continues very quiet. Flooring of the best quality is well sustained, but seconds are rather slow. Timber is dull.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N. Y.

From Our Own Correspondent.

March 10.—Trade has been unusually dull ; stock of lumber is large but very much broken up which will be remedied on opening of navigation.

Thero are no changes from last quotations :—

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

CHICAGO.

The *Northwestern Lumberman* of March 8, says :—The demand for lumber has generally improved since the beginning of March, under the stimulus of requirement for early building purposes. The severity of the winter past checked building all over that portion of the country subject to snow and frost, so that as soon as the weather moderated building was resumed with considerable activity, in order to make up for lost time. The disposition to purchase is encouraged by the inclination of holders to work off as much stock as they can in the shortest possible space of time. This motive to crowd sales arises from the winter having been unfavorable to building and trade, so that stocks have not disappeared from the yards to that extent which was reasonably expected. The dealers find themselves in possession of more lumber than they desire at this season, and the natural consequence is an urgency to sell. This disposition is indicated in reports from Buffalo, Toledo, points in Michigan and Wisconsin, and is very marked in this city. There is a widespread and general feeling that there is a greater surplus in supply than is good for the health of prices. At the same time thero is no doubt that the volume of demand will be heavy for the season to come.

Receipts, and stock on hand of lumber, shingles, etc., for the week ending March 8, as reported by the Lumberman's Exchange :

	RECEIPTS. Lumber.	Shingles
1883	6,933,000	2,792,000
1882	6,024,000	1,165,000

FROM JANUARY 1, 1883, TO MARCH 8, 1883, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1883	20,742,000	18,211,000
1882	52,887,000	13,070,000
Inc		5,141,000
Dec	32,035,000	

STOCK ON HAND FEB. 1.

	1883.	1882.	1881.
Lumber	600,572,673	471,350,108	444,922,272
Shingles	273,964,750	290,800,347	186,790,000
Lath	65,176,314	46,691,923	47,282,560
Pickets	3,044,790	3,052,823	2,426,482
Cedar posts	87,260	183,469	90,700

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of Feb. 24, says : This market is exceptionally dull, and there seems to be little or no animation anywhere. Nobody seems to want anything, and though sales for early shipment have been made here and there, they are, we understand, on a very limited scale in comparison with the transactions of former years. The auction sales just at this period are relied upon by dealers here to keep them supplied, so that we are hardly surprised to see some dullness pervading the metropolitan import trade, but the measure of flatness that has been reached at the present time has hardly a parallel.

That a revival of business throughout the country will sooner or later take place we have very little difficulty in believing, and the wood trade will be certain to share in the general reaction. The present position of importers is not unfavourable to such a view, and though unquestionably the inclination is to hold off rather than to buy at the present quotations, there is not the slightest doubt that the spring consumption will reduce the stocks here to such an extent that the trade will be forced to come into the market to secure what they want. The outports cannot long sustain an attitude of indifference, and though the London buyers can resort to the public sales, there is not the same source of supply open to the provincial merchant. Liverpool and Bristol hold auction sales of considerable importance, but that they have anything like the influence on the local markets that the Baltic sales here have, we cannot for a moment suppose. The London dealers, whose operations are chiefly confined to the public sales form such an important branch of tho trade that they could almost keep the metropolis supplied, depending on the auctions exclusively for their requirements. This could not be done at any other port but London, the frequency and magnitude of the public sales being quite peculiar to itself.

LIVERPOOL.

The *Timber Trades Journal* of Feb. 24, says : The arrivals continue very light, and consist chiefly of oddments from the United States, such as parcels of oak wagon scantling, which by the way, are the most important of all, and sundry consignments of walnutwood staves, and other similar goods. The steady demand which was noted as being a characteristic of the present condition of trade still continues, and there seem to be a fair amount of timber and deals of nearly all descriptions going into consumption. When the statistics of the present month are issued, it is very probable that a fair, if not a good, consumption will be found to have marked the present month.

With the good dividends recently paid by the leading lines of railway we may, perhaps, hope to seo some increased liveliness in the waggon building trade, if the directors desire to improve the condition of their rolling stock, and if they should decide to do so, then they could not seize a better opportunity than the present, when American oak wagon scantling is at such a low price as it figures to-day, when compared with the cost of producing the samo dimensions either from Baltic or Canadian oak in the log.

GLASGOW.

Tho *Timber Trades Journal* of Feb. 24, says : Business has been quiet during the past week, and only one cargo imported, consisting of pitch pine from Pensacola. Deliveries have been going on to a fair extent. Of deals (chiefly Canadian) there have been delivered from Yorkhill Yard here, since the beginning of the year, 112,000 pieces, being about the same quantity as for the corresponding period last year.

Messrs. Allison, Couslaud & Hamilton held a public sale at Greenock on the 15th inst. Transactions were limited, a good deal being withdrawn by the brokers, as the prices offered did not meet their views.

The sales were as follows :—

Quebec waney boardwood—			
60c. ft. av. per log		2s. 2d.	per c. ft.
Hewn pitch pine (slightly bent)—			
90 c. ft. av. per log		1s, 2d.	"
Prime sawn pitch pine—			
25 & 30 c. ft. av.		1s. 2d. & 1s. 2½d.	"
Bangor, N. S. spruce deals—			
12 & 13 ft	9×3	11d.	"

WINNIPEG CONTRACTS.

A Winnipeg correspondent says that last year the city of Winnipeg purchased about 3,500,000

feet of lumber. It cost $30 per 1,000 feet, for lumber up to 16-feet pieces ; and $1 per 1,000 for every foot beyond that size. The supplies were obtained from city lumbermen. The council decided that this year all supplies should be purchased by tender and contract. Tenders for lumber were called for. About a dozen were put in. They were opened and considered by the board of works recently. Several of the tenders were from United States firms. The prices ran from $24.48 to $31.50 per 1,000 feet. The contract was awarded to Wood & Co. at $25.88. An accepted cheque for $2,000 accompanied the tender. The next highest tender was put in by J. G. Macdonald for $25.-95. Supposing that the city will use about the same quantity of lumber this year as was used last year, it will save $17,500 by the tender and contract system. It is understood that the successful tenderer is or was a member of the firm of McBain, Wood & Company, and that the lumber to be supplied will be brought in from Quebec via the Thunder Bay route. The contract is an important one, inasmuch as it shows that lumber is going to be $5 per 1,000 cheaper this year than it was last. If it can be brought from Quebec and sold to the city at $24.88, it can also be sold to the general public at as cheap if not a cheaper rate.

EFFECTS OF STORMS.

We learn from Aberlour, Banffshire, that great destruction of timber was caused by the gale of Tuesday week. On Drum of Carron, from eight to ten acres of pine trees were levelled with the ground. On the Knock of Allachie, belonging to Mr. Duff, of Aberlour, several hundreds of fir trees were uprooted. Very many of these trees are broken, some through the middle, others at the bottom, and they lie sometimes in heaps of half-a-dozen, tumbled and twisted above each other. They are mostly the best and largest trees that have fallen. At Ballindallock the gale was of unusual severity, commencing on Tuesday night and continuing unabated till noon on Wednesday. It was considered by many to be worse than the storm on the night the Tay Bridge fell. The woods have suffered most damage. Many fine trees have been uprooted or broken across in the most exposed parts of the woods at Phonas, and Drum of Carron. In the Drum Wood, which belongs to Mr. H. A. Grant, of Elchies, many acres of timber are uprooted. The farmsteading of Greenmoss, occupied by Mr. Ellis, which was thatched with straw and heather, was on one side clean stripped to the rafters. The stackyards came in for considerable loss. Many stacks have been turned over and scattered in every direction. Wooden erections suffered a great deal of damage.—*Timber Trades Journal.*

A Good Old Miller.

A New Jersey Miller, who had become old and rheumatic, one day called his sons about him, and said: "Boys, I am growing stiff in the knees and faint at heart. My liver is out of order, and I can no longer distinguish between a peck and a half bushel when taking toll. This mill is worth ten thousand dollars. In order to form a stock company, and render my own burdens the lighter, I shall give Reuben two-tenths, Samuel the same, and Henry, who is my first born, three-tenths. Bless you, my children, bless you. You may go fishing for half a day." The three sons took the papers which the old man had made out, and instead of going fishing they went down to a lawyer's office, called a meeting of stock-holders, and proceeded to business. The first-born was elected president, Reuben treasurer, and Samuel secretary, and the following resolution was passed: "*Resolved*,—That we bounce the old man, and run the mill after our own ideas !"

The above from the *Millers' Review* (Philadelphia), illustrates substantially the experience of a good many indulgent, confiding fathers. Some that read this will be reminded of like cases that have come under their own notice.—*Scientific American.*

The Dismal Swamp.

The Dismal Swamp in Virginia is much reduced in extent compared to what it was twenty years ago. It now contains, says a rocent visitor there, some of the best farming land in the State. A railroad runs across it, and it is on its way to final extinction. The drainage of Lake Drummond, a central body of water lying higher than the average level of the swamp, would make the whole area fertile. This is a project of Gov. Benjamin F. Butler, who once had surveys made, but at length abandoned it. The one great industry of the swamp is lumbering. It is penetrated by small ditches in connection with larger canals, and by rude tramroads, over which the logs are hauled to be sawed up into shingles, railroad ties and fencing. The lake, however, with its fringe of cypress and its projecting roots and stumps, is just as dismal as ever.—*Scientific American.*

THE PROSPECTS.

The Chicago *Lumber Trades Journal* says:—A representative of this journal, in rambling through the country during February, picked up considerable information relating to the condition, actual and prospective, of trade. The opinion among the dealers in whatever town his curiosity led him was emphatic in the belief that a large and profitable trade would open up in the spring, extensive building would begin at the earliest favorable period to pursue work, and the improvements, especially among the farmers, would assume large proportions. The northern part of this state will unquestionably witness, in every line, a marked progress. Along both the Chicago, Burlington & Quincy and Northwestern railroads the dealers are sanguine of a very satisfactory trade. Stocks are not what might be called good upon these lines of travel, for in view of a severe winter the dealers hesitated exceedingly, and did not put in big stocks in the fall, because of the uncertainty of how long they would have to carry them. The weather throughout the country has been very severe and trade amounted to but little in consequence. In Iowa and Nebraska it is stated that the building operations will exceed anything heretofore.

CLOTHES PINS.

The Newmarket *Era* says:—Nearly all the machinery taken to the temporary saw-mill on the 5th of East Gwillimbury last summer by the Messrs. Cane, has been brought back to the mills here this week. It is intended to commence next week at replacing it ready for spring work. There are now over 27,000 logs in and about 200 are yet to come in, but the teams are busy just now in hauling clothes-pin and pail timber. The new dry kilns are now complete and working like a charm. The pail-timber is sawn the proper length and shape and is piled in cars capable of holding 370 cubic feet. There are twelve of these cars, and as soon as one is filled it is shoved into the kiln and another, now dry, taken out of the other end worked up, thus having ten cars of stuff drying all the time. A large wooden chimney, about 40 feet high, has been erected at the back of the building which causes a constant circulation of hot air through the entire kiln, the heating of which we have aluded to. One of these carloads is manufactured into pails and tubs, and another car filled with green material, every day. This kiln is built especially for this branch of the trade and is independent of the other dry kilns. The manufacture of clothes pins is attaining considerable proportions. They are now making, ready for shipment, about 30,000 per day, out of beech, birch, and maple wood. Each pin passes through seven machines before being dried and packed. The firm have already gained the reputation of making the smoothest and neatest pin in the Dominion.

SHADE TREES ALONG THE CANAL.

The St. Catharines *Journal* says:—Mr. Ellis, superintendent of the Welland canal, proposes, during the coming spring, to plant a number of shade trees along the banks of the canal. The idea seems to be an excellent one. While a general tree planting will add considerably to the scenic effect, a much more important and practical feature will be the advantage to the canal banks. In many places the banks being more or less exposed, the planting of trees will be of advantage by holding the soil by reason of the roots permeating in every direction.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

During the past summer a few willow trees were planted in the neighborhood of some of the locks; but the number was very small. We are glad to see that Mr. Ellis has contrived to have a good deal of very necessary work accomplished along the canal that was much needed. A great many exposed places at the approaches to locks and bridges have been securely fenced, so that there can be little danger of accidents occurring at these points. Had this work not been done there can be little doubt but sooner or later some serious accidents would have taken place.

PLANTING THE PRAIRIES.

The *Lumberman's Gazette* says:—The question of whether forest trees will or will not grow on the prairies of the American Northwest is being warmly debated in connection with the bill introduced into congress setting apart a quarter of a million acres in Dakota for the cultivation of trees. The assertion having been made that owing to the long-continued droughts trees could not be successfully grown in Dakota west of the James river, Mr. Leonard B. Hodges, of St. Paul, replied as follows in an address delivered before the Minnesota State Horticultural Society: "The fact that within the last ten years hundreds of groves, containing millions of healthy, vigorous young forest trees, are now growing far out in the treeless region, where science had preordained and doomed the work an impossibility, must be acknowledged. The fact that young groves of forest trees are now being successfully grown on the line of the Northern Pacific Railroad, away out and beyond the 100th meridian, has also to be admitted, science and its votaries to the contrary notwithstanding."

Saginaw District.

EAST SAGINAW, MICH., March 6.—There is plenty of snow in the woods. The days are mild and the nights cool. Roads are in good condition, and logging is progressing as favorable as could be expected. There is some crust to the snow, and the conditions for cutting and skidding rapidly are no better than before the thaw settled the snow. It is estimated that in neighborhood of 90,000,000 feet have already reached the banks of the Rifle river. Reports from other streams do not differ materially from those I sent you last week. The Flint & Pere Marquette railroad is hauling large quantities of logs, the quantity for January exceeding 16,000,000 feet. S. R. Hall has gone to his camps on the pine river for the purpose of discontinuing operations. He has secured 9,-000,000 feet this winter.—*Northwestern Lumberman.*

The Cow Tree.

Sir Joseph Hooker, in his report on Kew Gardens, gives a sketch of a most interesting botanical curiosity, the *Palo de vaca*, or cow tree. This tree grows in forests at the foot of certain mountain ranges in Venezuela, and attains a height of 100 feet, and frequently the trunk reaches to 70 feet without a branch. The remarkable characteristic of the tree is the milk which exudes from the truuk when an incision is made. The flavor is of sweet cream with a slight balsamic taste, but it is very wholesome and nourishing, the composition being said to approach very near the milk of a cow. From the fact that the milk is somewhat glutinous it would seem that the tree is of the caoutchouc order. Seeds which have been sent to Bombay and the colonies are said to be thriving well. It is noteworthy, as an example of the law of compensation traceable in nature generally, that this cow tree seems originally to have been a native of a country where milk giving animals were formerly totally unknown.

AN Ottawa despatch says:—Shanty teams are returning to the city in droves. The weather has been unusually advantageous for a good cut. The entire cut in the Kippewa district has been got out to the streams ready for the drive.

SHERRY, JERRY & Co. are constructing a logging railroad from Vesper, Wood county, Wis., four miles northwest to the extremity of their pine tract. They have received the steel rails and a locomotive, and will push the work to completion. A contemplated road from Centralia to Vesper would connect with the road being constructed.

HUNDREDS of thousands of cedar hop-poles are being shipped from Canada into New York, mostly by way of Ogdensburg, whence they are shipped iuto the central part of the state by way of the Rome, Watertown & Ogdensburg road. The high price of hops this has stimulated this industry, and every man who owns a second-growth cedar grove has a bonanza.

THE Chicago *Northwestern Lumberman* says: The new treaty with Mexico, whereby numerous manufactured articles are to be admitted into that country from this free of duty, in reciprocity for a like privilege on the part of the United States, will permit the admission of ready-made houses of wood or iron free. This gives another opportunity for the "knock-down"-house business.

THE Fall Mountain Paper Company is erecting at Bellows Falls, Vt., a large furnace t burn waste wet chips and bark from the wood-pulp mill, which are first compressed in a hay-press. By the applicatiou of hot air above the fire an intense heat is secured, aud the claim is made that the plan of boiler adopted will produce double the quantity of steam than can be made where coal is used for fuel. The company has 29 furnaces in its different mills.

MICHIGAN LUMBER.

MARQUETTE, MICH., February 27.—Since my last report we had several falls of snow. On Sunday and Monday over one foot of snow fell, and the drifts were so bad trains were not run on the Detroit, Mackinaw & Marquette railroad. Skidding is almost out of the question. It costs about all logs are worth to get them on the skids. It is impossible now to get the quantity anticipated last fall. I think the shortage will be fully 20 per cent., and probably 5 per cent. of this deficiency will be put in by summer logging. The Vulcan furnace is finished at Newberry. It is a very large establishment, and said to have cost $250,000. The charcoal will be made by a new process in retorts, instead of the old-fashioned way. This company has built a saw-mill in connection with the furnace, and intends manufacturing all the best maple and birch into lumber, putting the refuse and poor logs into charcoal. Two miles further west, at Dollarville, the American Lumber Company has built a first-class mill for pine, which will be ready for sawing in a month, Quite a large business village has been built up since last fall. Business is being pushed lively, and this point promises to be of some importance at an early day. Tho mill will cut about 14,000,000 feet, and a full stock is being got out. Seney is another lumber village of importance. The Chicago Lumber Company, Ayer, Smith & Co., Perry & Pearson, and Hewet all have offices and warehouses here. This will be the centre of an output of about 40,000,000 feet of lumber this year. The outlet is by Fox and Monistique rivers to Lake Michigan. Perry & Pearson have four camps 30 miles up the line, the product of which is railroaded and dumped here into the Fox river. In the vicinity of Marquette the mills of Fraser, Gillett and the Eagle Mills are all running this winter, principally on bills for the mines. Men's wages still keep high—about $30 a month.—*Northwestern Lumberman.*

THE SWEDISH TRADE.

The Stockholm correspondent of the *Timber Trades Journal* says:—The languor which has been observable in the f.o.b. trade from the north of Sweden has only very partially disappeared, and unusually few sales have been made up to date. Fair-sized lines of best redwood goods have been disposed of to Hull and Grimsby, as well as to north French ports, while considerable quantities of goods have been sold to Channel ports, notably Poole. Notwithstanding all this, however, importers are acting with an amount of caution, and showing a disinclination to purchaso, that was was scarcely expected two or three months ago. Unless stocks abroad are much greater and the prospects of trade considerably worse than anticipated, this state of matters cannot be expected to continue much longer.

The weather has lately been favourable for getting logs out of the woods, and, in spite of the quantity of snow that has fallen, appearances would seem to indicate that an average "get" will be obtained, although at a somewhat enhanced cost. Sawing has commenced for the season at many of the principal mills, with an ample log supply for the early part of the year.

NORTH CAROLINA FORESTS.

An enthusiastic writer says:—"The white pine is confined to the mountain and Piedmont, or western part of the state, in great abundance in some counties, and of enormous size—more than three feet in diameter, and 100 to 150 feet high. The oaks excel in variety and species, in extent of distribution, and predominate in two-thirds of the state, middle and western. The white oak, a species called post oak, is much valued on account of its strength and durability. Large exports are made to England in the form of staves and ship timber. Red, black and willow oak are very abundant in the middle and western districts, and grow to an immense size, while live oak is confined to the eastern section. Seven species of hickory abound, and are distributed over nearly overy section of the state, and are of great size. Being one of the most dense, rigid, heavy and durable of timber, it is said to have become recently in great demand, and shipped for manufacturing purposes to Europe, California, Australia and other mining sections. Black walnut is abundant in the middle and western sections. The chestnut is one of the largest and oldest trees, sometimes 10 feet in diameter and 80 feet high, found mostly and abundant in the Piedmont and mountain sections. Poplar is one of the largest and handsomest of trees, attaining the greatest size in the mountain counties. It is largely used for building and other domestic purposes as a substitute for pine. Cypress abounds in the lowlands of the east, and it grows to a great size. Tho ship-yards of New York and Philadelphia attest the use of 20 kinds of timber, all of which, and more, grow in North Carolina, for the most part easy of access, and facilities of transportation becoming more convenient, in proportion as these vast, valuable resources are largely developed."

MIRAMICHI PINE DEALS.

A correspondent of the London *Timber Trades Journal* says:

SIR,—I was very much surprisod to see in your last paper a serious charge brought against the port of Miramichi for shipping bad deals—bad in their nature; for what can be worse than a predisposition to rot, of which the production of fungi is a certain indication?

I have always esteemed Miramichi pine as second only, if second, to Quobec, and by some it is even preferred. Nor did I ever before hear of this tendency to sudden decay, which your correspondent "Lignum" ascribes to it, till I saw his letter in your *Journal.* Perhaps he will be good enough to let us known where this phenomenon, peculiar only to Miramichi pine deals, can be seen, in contrast with some other deals equally ill-piled—that is, with insufficiency of air, and standing equally long in the same state.

It is not a light matter to affix a stigma of this kind in your widely circulated paper upon a shipping port that has herctofore, as far as my experience goes, maintained an exceptionally good repute. "Lignum" boldly affirms that Miramichi deals *do decay more rapidly than those from Quebec.* In the name of the shippers of Miramichi, I challenge him to the proof. He speaks with *authority*, and we call on him to show whence it is derived.

Trusting that you will give this letter also a place in your columns,—I am, Sir, your obedient servant,

AN OLD IMPORTER.

London, 15th February 1883.

HEMLOCK OPERATIONS.

A correspondent of the *Northwestern Lumberman* says:—In reading the *Lumberman*, I frequently see accounts of lumber operations east and west of us. It may be of some little interest to known that this section of country adds somewhat to the annual lumber production. The Sargeant Lumber Company, with mills at Sargeant Station, on the Pennsylvania & Erie railroad, sawed the past year 6,000,000 feet of hemlock and about 350,000 feet of cherry; the sale for this production being found in eastern Pennsylvania, New Jersey, Maryland and Delaware. The cherry timber is being rapidly cut from our forests, and few, if any, choice orchards of it can now be found in this section. This company carries about an average stock of 1,000,000 feet of hemlock, and, owing to the heavy demand, has been sawing all winter. The company has banked at the mill about 1,000,000 feet of hemlock logs and 250,000 feet of cherry logs.

Soon the woods will again resound with the woodman s axe and bark-peeling will begin. The large amount of hemlock bark peeled last year weakened the price of bark considerably, many, and, in fact, nearly all the tanners, putting in heavy stocks of bark. We do not think there will be as heavy a slaughter of bark this season. We have had an excellent winter for logging, with snow about three feet deep. The recent rains seemed to have no preceptible effect on the snow, but to-day's sunshine, with a warm wind, is making it disappear rapidly.

We are located near the summit of the Allegheny mountains, and are surrounded with heavy forests of hemlock, which is growing into a heavier demand on its merits for buildings, etc. It is noticeable that quite a quantity of it finds a market at the summer resorts along the sea shore—Cape May, Long Branch, Atlantic City, etc.

SPRUCE IN ENGLAND.

The *Timber Trades Journal* says:—An improved feeling is said to have ruled during the past week in the spruce markets, and the downward tendency of prices, we are told, has been slightly checked. The fall in the value of spruce was so sudden that an early recovery was, under ordinary canditions to be expected, and although for several reasons it is hardly likely that figures which ruled last autumn will be fully recovered during the spring months, yet a slight advance above present quotations may be perhaps experienced. Selling brokers are said to have had, during the last fortnight, plenty of inquiries from the west coast, and transactions in connection with spruce have, of late, been of a more lively character than with any other classes of wood goods. We believe, however, that in consequence of the heavy deliveries of spruce deals, which occurred on the arrival of the fall fleet, the inland stocks have been fully replenished, and that quite an average weight is held by consumers, and stored at the various wharves and railway depots inland.

It would seem that the spruce markets every year more and more effect the value of other kinds of whitewood, and indeed they effect in some parts of the country to a limited extent the commoner qualities of redwood also. Any improvement, therefore, which may occur during the next few weeks in connection with the value of spruce will be closely observed, and the holders of large stocks will, doubtless, read with ready satisfaction any notes indicating an existent or coming improvement.

WOODS AND FORESTS.

The following is the official statement of revenue collected during the year ending 31st December, 1882, as taken from the annual report of the Ontario Crown Lands Commissioner:

Ottawa Timber District.		
Collected at Ottawa	179,612.93	
Collected at Quebec.....	62,563.28	
		242,176.21
Belleville Timber District.		
Collected at Belleville & Department.....	112,773.74	
Collected at Quebec.....	2,590.99	
		115,364.73
Western Timber District.		
Collected at Department.....	111,630.63	
Collected at Quebec.....	13,568.92	
		125,199.60
		482,740.54
Collected on sale of Limits, of 6th December, 1881.....		411,311.65
Total		894,052.19

Albany Stocks.

Bradstreet's is authority for the statement that the total stocks of white pine lumber on hand at Albany, Jan. 1, 1882, amounted to 96,917,829 feet, and on Jan. 1, 1883, to 101,258,685 feet. The total sales of white piue during the calendar year amounted to 252,673,700 feet. The receipts were 453,932,358 feet. The stocks of Norway pine increased from 1,077,260 feet, Jan. 1. 1882, to 2,988,072 feet on Jan. 1, 1883, the sales amounting to but 311,010 feet during the year, and the receipts to 3,269,082 feet. The total sales in 1882 "of measured and tally lumber" amounted to 440,400,227 feet, and the aggregate of stocks on hand Jan. 1 last was 112,256,938 feet against something over 106,000,000 feet on Jan. 1, 1882, a gain in stocks ou the year of about 6,000,000 feet.

Spruce Beams.

Experiments have proven that spruce beams, loaded from one-half to two-thirds their breaking strain, finally break after a long and steady deflection, which continually increases until the final rupture occurs. If substantiated by additional experiments this fact will, the *United States Miller* believes, go far towards explaining the frequent falling of mill and warehouse floors, under loads supposed by the builders to be perfectly safe. The floors of all such buildings, says the journal referred to, should be sufficiently strong to carry at least three times the weight that can by any possibility be put on them, and at least five times as strong as the ordinary load. When there is running machinary in the building, which is likely to produce jar or tremble, these figures must be exceeded—according to the same authority—as the effect of a continuous jar or strain combined is very destructive to the building in which they are found.

A BIG PLANER.

A Maine paper says that in one of the Bath ship-yards is a planer, said to be the largest in the world. It is capable of working a piece of timber 66 feet long. five feet wide and two and a half feet deep. The keel comes out of the machine ready for laying on the blocks, and perfectly smooth and true on all sides. A beveling saw is another capacious machine, which turns out timber sawed at any desired angle from the horizontal, and by it curved timber and ship-knees can be worked true to a line. The steam engine which runs these machines runs also a bolt-cutting machine which will nip off round iron of any diameter up to two inches; also a large and small circular saw, a machine for making tree-nails, and, in the finishing shop, a band circular saw, a planer, moulding machine, and a plug and wedge machine. The waste steam is used in bending timber.

North West "Pine."

The Chicago *Northwestern Lumberman* says: The *Lumberman*, in a recent issue, mentioned that Mr. Louis Sands, of Manistee, Michigan, had made a large purchase of pine in the Cypress Hills, in the Northwestern Territory, Canada. A Canadian correspondent seeks to make a correction, and states that there is not a pine tree between Winnipeg and the Rocky mountains, north of the forty-ninth parallel of latitude. He knows there is not, he writes, for he has traveled over that country. Mr. Sands calls the timber cypress pine, and says that if it is not pine it will at least sell for it, and answer the purpose. It lies between the forty-ninth and fiftieth parallels of latitude. A specimen of the wood is in this office, and while it does not have the exact appearance of white pine, it is timber of very fine quality, and undoubtedly, as Mr. Sands says, "will answer the purpose."

A Deferred Investment.

The Stockholm correspondent of the *Timber Trades Journal* says:—A very extensive purchase has lately been effected, by a consortium here, of growing timber along the East Dal River, a few miles above the Siljan Lake. The purchase is estimated to cover over 1,000,000 mature trees, and the price is understood to be reasonable. The timber, however, will not be available until somewhere about, 1890 the Government survey of the forest, preparatory to its division amongst those entitled to the same, being yet incomplete. This purchase is a proof that capitalists have an abounding faith in the future of forest property and the products obtained therefrom, when they are prepared to wait eight or ten years before they get even a partial return on the capital.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily, and honorably. Address TRUE & Co., Augusta, Maine.

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THE RE-AFFORESTING OF IRELAND.

The *Timber Trades Journal* says:—With reference to Dr. Lyons' plan for re-afforesting the mountain sides and other waste lands in Ireland it appears from a contemporary that the forestry accounts for Prussia were recently published at Berlin, and since that time there have been issued in England two consular reports relating to the same species of property in France and Bavaria. It appears that in Prussia there are about 7,000,000 acres of State forest, about 11,000,000 acres of woodland owned by private persons, and about 2,000,000 acres managed by the local corporations. Very little of this is planted with anything except pine, fir or beech, and almost the whole extent is cropped according to the strictest rules with a view to profit. The net return per acre, taking the State forests and private properties together amounts to about 3s 7d., which is made up by deducting 4s 2d., as the cost of culture, cutting and carrying, from the gross return of 7s 9d. produced by the sales of timber. In Bavaria the State forests cover considerably more than 2,000,000 acres, and the gross return is rather under 23,000,000 marks, or almost exactly 10s. per acre. the expenses come to 13,000,000 marks, or 5s 8d. per acre, leaving a net profit of 9,750,000 marks, or 4s 4d. per acre. In France the forests form an important part of the public domain, yielding more than two-thirds of the total revenue derived from it. The net annual profits may be set down at an average of a million and a half sterling; but then a large part of this sum, especially since the fall of the Empire, has been made by letting out the forests by auction for sporting purposes.

Now we do not consider that the small annual return per acre of forest lands offers any discouragement whatever to the scheme of Dr. Lyons, for the replanting of a tract of country now producing nothing and affording no employment to the native inhabitants of the land is quite a different thing from commencing public works, with a view to give people temporary occupation, such as the building of a pier, a court-house, a jail, or a workhouse, because these attract workmen to the neighborhood, who when the buildings are finished often encumber it with additions to a population which was already too great for the means of living to be obtained thereabout. But the planting of lands, with a view to profit, would be a source of perpetual employment to the laborers once engaged in it, in a cheery and healthful way, a kind of life which is denied to the weavers and spinners of Manchester, except when a brief holiday gives them a chance to sniff the fresh air of the country. Bare plains and bleak hill-sides, not affording a rag of shelter now for man or beast, would soon become fit for human habitation, and under the forest screen little clearances might be made, and cottage homes erected, which would tend to diffuse peace and contentment through a whole district. A vivid fancy might conceive many pleasant rural combinations arising therefrom, and some future Gray, who had visited the region in its forest glory, might exclaim:—

"How jocund did they drive their team afield,
How bowed the woods beneath their sturdy stroke!"

But we have to deal with facts, not poetry, whose essence is fiction, and since we have taken up the subject we have seen it stated that the Russian forests do not return above 1½d. per acre per annum to the Government. Possibly the Czar is satisfied with them if they support a contented peasantry, though they contribute so little to his exchequer.

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	Per Piece.	
Saw logs, 17 feet and under	2-5	*cent.*
Red and white pine, tamarac, spruce and Hemlock, round or flatted, over 17 ft. and under 25 ft. long	8-15	"
do do 25 to 35 ft. long	⅔	"
do do 25 ft. and upwards in length	2 1-15	"
Red and white pine, tamarac, spruce and Hemlock, sqnare	1 3-5	"
Oak, elm, and other harwood, square or flatted	2 2-5	"

THROUGH FORT WILLIAM BOOM.

Saw logs, 17 ft. and under	⅓	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	4-9	"
do do 25 to 35 feet long	5-9	"
do do 35 ft. and upwards in length.	8-9	"
Red and white pine, tamarac, spruce and hemlock, square	1⅓	"
Oak, elm, and other hardwood, square or flatted	2	"

THROUGH ALLUMETTE BOOM.

Saw logs, 17 ft. and under	3-10	"
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	2-5	"
do do 25 to 35 ft. long	½	"
do do 35 ft. and upwards in length	4-5	"
Red and white pine, tamarac, spruce and hemlock, square	1 1-5	"
Oak, elm, and other hardwood, square or flatted	1 4-5	"

THROUGH MELONS CHENAIL BOOM.

Saw logs 17 ft. and under	1-10	"
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	2-15	"
do do 25 to 35 ft. long	1-6	"
do do 35 ft. and upwards in length	4-15	"
Red and white pine, tamarac, spruce and hemlock, square	2-5	"
Oak, elm and other hardwood, square or flatted	3-5	"

PASSING LAPASSE BOOM.

Same as Fort William boom.

THROUGH IMPROVEMENTS IN MISSISSIPPI CHENAIL, CHATS RAPIDS, AND QUIO BOOM, OR ANY OF THEM.

Saw logs, 17 ft. and under	¾	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	1	"
do do 25 to 35 ft. long	1½	"
do do 35 ft. and upwards in length	2	"
Red and white pine, tamarac, spruce and hemlock, square	3	"
Oak, elm and other hardwood, square or flatted	4½	"

THROUGH IMPROVEMENTS FROM DESCHENES TO HEAD OF HALL SLIDE, NORTH SIDE.

Saw logs, 17 ft. and under	½	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	⅔	"
do do 25 to 35 ft. long	5-6	"
do do 35 ft and upwards in length.	1⅓	"
Red and white pine, tamarac, spruce and hemlock, square	2	"
Oak, elm and other hardwood, square or flatted	3	"

THROUGH IMPROVEMENTS IN THOMSONS' BAY.

Saw logs, 17 ft. and under	⅝	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, 17 ft. and under 25 ft. long	5-6	"
do do 25 to 35 ft. long	1 1-24	"
do do 35 ft. and upwards in length	1⅔	"
Red and white pine, tamarac, spruce and hemlock, square	2½	"
Oak, elm and other hardwood, square or flatted	3⅔	"

THROUGH IMPROVEMENTS IN LIMEKILN EDDY.

Saw logs, 17 ft. and under	⅛	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	⅓	"
do do 25 to 35 ft. long	5-24	cent.
do do 35 ft. and upwards in length	⅓	"
Red and white pine, tamarac, spruce and hemlock, square	½	"
Oak, elm and other hardwood, square or flatted	⅔	"

THROUGH BOOM BELOW THE OUTLET OF HULL SLIDE.

Saw logs, 17 ft. and under	1-5	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	4-15	"
do do 25 to 35 ft. long	⅓	"
do do 35 ft. and upwards in length	8-15	"
Red and white pike, tamarac, spruce and hemlock, square	4-5	"
Oak, elm and other hardwood, square or flatted	1 1-5	"

BOOM WORKING EXPENSE RATES THROUGH DES JOACHIMS BOOM.

Saw logs, 17 ft. and under	2	cents.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft long	2⅔	"
do do 25 to 35 ft. long	3⅓	"
do do 35 ft. and upwards in length	5⅓	"
Red and white pine, tamarac, spruce and hemlock, square	8	"
Oak, elm and other hardwood, square or flatted	12	"

THROUGH FORT WILLIAM BOOM.

Saw logs, 17 ft. and under	1	cent.
Red and white pine, tamarac, spruce and hemlock, round or flatted, over 17 ft. and under 25 ft. long	1⅓	"
do do 25 to 35 ft. long	1⅔	"
do do 35 ft. and upwards in length	2⅔	"
Red and white pine, tamarac, spruce and hemlock, square	4	"
Oak, elm and other hardwood, square or flatted	6	"

THROUGH ALLUMETTE BOOM.

Same as Fort William boom.

THROUGH MELONS CHENAIL BOOM.

Same as Fort William boom.

THROUGH IMPROVEMENTS IN MISSISSIPPI CHENAIL, CHATS RAPIDS, AND QUIO BOOM, OR ANY OF THEM.

Saw logs, 17 ft and under.	1½	cent.
Red and white pine, tamarac, spruce and hemlock, round, or flatted, over 17 ft. and under 25 ft. long	2	"
do do 25 to 35 ft. long	2½	"
do do 35 ft. and upwards in length	4	"
Red and white pine, tamarac, spruce and hemlock, square	9	"
Oak, elm and other hardwood, square or flatted	9	"

THROUGH IMPROVEMENTS IN THOMSON'S BAY.

Same as Fort William boom.

EXAGGERATED ACCOUNTS.

The *Northwestern Lumberman* says:—There is still considerable afloat about straw lumber, and some of the facts are highly exaggerated. Some of the newspapers catching up the oft-repeated statement about the invention are inclined to claim more for the article than the manufacturers of it would care to claim. One of the points that seems a little mixed is the assertion that it will enter into competition with wide walnut lumber, at about one-half the price of the latter. It has not been shown that the product is much of a competitor with walnut, while it costs much more. Referring to the price-list of the company making the straw lumber, it is seen that the cost of a thousand feet is at the rate of $10 per ply for three ply and under, and $8.50 for four-ply and over, the ples running one-sixteenth inch in thickness. Reckoning 16 plies for inch thick, at $8.50 per ply, the result is $136, which would buy a fair grade of counter tops, or 2,000 feet of firsts and seconds. It is well enough to let straw lumber stand on its own merits, without getting beyond the bounds of facts and probabilities.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

LITTLE BY LITTLE.—The constant dropping of water will wear away even the hardest stone. So the constant irritation of a cough will so wear upon the lungs as to induce incurable Consumption. Hagyard's Pectoral Balsam will cure the worst cough, speedily and effectually.

FORTUNATELY Valvular disease of the heart is not very common, its disturbed action may be due to indigestion, liver irregularities &c. A Stomach disturbed with wind, or indigestable food will cause pain and fluttering by crowding on the nerves of the heart. Burdock Blood Bitters will speedily remedy all such difficulties.

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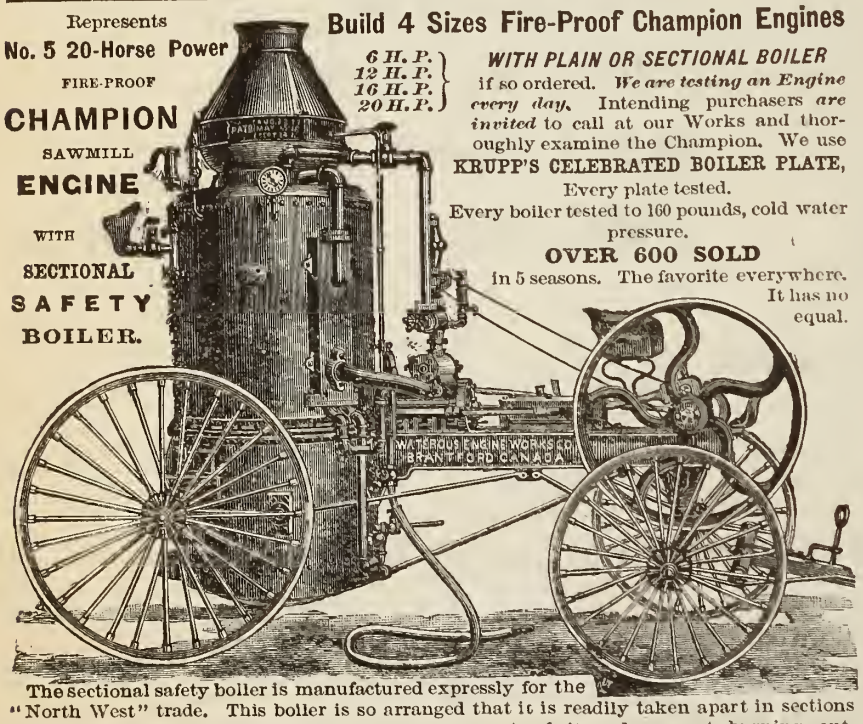

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VOL. 3. PETERBOROUGH, ONT., APRIL 2, 1883. NO. 7.

INDIANA WALNUT.

Every day the fact becomes more apparent that walnut in Indiana, once the great walnut state of the union, is getting very scarce. Men who are as competent to judge as any, say that the standing walnut in the state does not exceed 3,000,000 feet, and much of this will not come into market right away, as it is held by farmers who are able to keep it, and do so with two objects in view—the trees on their farms beautify them, and they think that as walnut becomes scarcer it will command still higher prices. In sections which once produced the finest walnut lumber, the lumber cut from the logs now runs 90 per cent. to culls, which shows that the trees which can be got at at all have been closely picked, In the earlier days of the state, walnut was an eyesore to the settlers. It caused them a great amount of trouble, because, when in log-heaps it was consumed with so much difficulty. Had some of the finest trees been allowed to remain, their worth to-day would have been more than the farms on which these trees once stood are now worth ; yet it is not to be wondered at that the early farmers did not consider the prospective value of the wood. They thought it plentiful everywhere ; moreover, the groves, in great part, were obliged to give way, in order that a living could be obtained from the soil. Not many years ago the largest trees went begging for buyers at $3 and $4 each, which are now worth $100 to $150 each, and even higher prices than these have been paid. The most valuable use to which the settler could put the wood was in making rails, and for this purpose, as a matter of course, the finest, straightest grained trees were selected. The trees that were not of this kind were put into the log-heaps and burned. There are any quantity of walnut rails, as straight as a gun-barrel, in Indiana, that have served in fences for 40 years and more, and they are as sound to-day as they were the day they were split. In fact a walnut rail will last until the weather beats it into atoms. They rarely rot, and without much doubt many of these rails will, in time, find their way to market, cut into convenient sizes, and the cabinet-maker who uses them will have the satisfaction of working very choice wood, and he will have no cause to grumble because it is not thoroughly seasoned. —*Northwestern Lumberman.*

SHIPPING FOR QUEBEC.

A correspondent, signing himself "Fair Play," writes as follows to the editor of the Newcastle, England, *Daily Journal* :—Sir, in a short time we shall have entered again into the season of activity, when chartering operations will have commenced for the supplies of Quebec timber for the current year, and I would earnestly urge shipowners interested in the trade to consider well the decline, and utterly ruinous state, of what I may call their part of the business, before being led into any future engagements ; and also to endeavor, if possible, to arrive at some understanding, or some unanimity of action, whereby they may be able to promote and protect each other's interests, as well as the value of their own property. The year that has just closed has been one of continued prosperity and profit to all connected with the trade except the shipowner, who, though he must know he constitutes a great power in the business, seems to accept with resignation the position as the inevitable, and, so familiar does he appear to have become with the grinding and unjustifiably low freights of late years, that he may be said to be now acting more from custom than from reason. And yet for all this I cannot but think he has much himself to blame. In most things relating to commerce the market is regulated by the laws of supply and demand, and the value of a commodity is what it will bring ; and it does seem almost inexplicable, and certainly most inconsistent, that while the business is so flourishing and profitable to others, and while, at the same time, wooden ships suitable for the trade are becoming more and more scarce, the rates of freights should each succeeding year continue at almost fixed figures utterly incompatible with any ideas of profit, and altogether insufficient for the purposes of providing the ever-recurring outlay for keeping up the efficiency of the vessels with the requirements of the Board of Trade ; while, at the same time, however contrary it may appear, to the natural course of things, the value of the vessels themselves, instead of being enhanced by reason of the demand being in excess of the supply, has, in reality, declined to less than half what they were worth within a comparatively recent period. If the tonnage engaged in the trade were superabundant, it could easily be understood that not only the rates of freight but the market value of such tonnage, would be reflected in the nature of the circumstances. But take the facts of the present case. Upwards of 700,000 tons of wooden ships under the British flag have been removed from the registry within the last four years, so that, instead of a superabundance of tonnage, it is evident that a scarcity, which is sure to make itself felt, will be the ruling feature in the Quebec trade, until the supplies can be drawn from some other source than wooden ships ; and it might be well for shipowners to remember, and merchants also, that although the opening rates of late years, and notably those of last spring, paralyzed the market for the remainder of the year, they had no sooner been accepted than the actual scarcity of tonnage, which at some time or other was imminent, became apparent, and continued up to the close of the season ; so that in the end the rates which opened in the spring at 22s. and 23s. per load, closed in the fall at 33s. and 34s., and in some cases even higher. The same influence will prevail in the present year, as ships cannot become more plentiful, because they are not in existence, and the trade has all the appearance of continuing as flourishing as last year."

WEST VIRGINIA FORESTS.

Forestry Bulletin No. 25, relating to the forests of West Virginia, has a map of the state showing the distribution of forests with special reference to the lumber industry, and the following comments :—

The forests of West Virginia, with the exception of the belts of pine and spruce confined to the higher ridges of the Allegheny mountains, are principally composed of broad-leaved trees, the most important of which are the white and chestnut oaks, the black walnut, the yellow poplar and the cherry. The forests have been largely removed from the counties bordering the Ohio river, and the most valuable timber along the principal streams, especially the black walnut, cherry, and yellow poplar, has been culled in nearly every part of the state. The black walnut, found scattered everywhere in West Virginia, is least plentiful in the northwestern and Ohio river counties, and most abundant along the upper waters of the rivers flowing into the Ohio through the southwestern part of the state. Yellow poplar is found throughout the state, and is still abundant about the headwaters of nearly all the principal streams, Large bodies of cherry are found in Greenbrier, Nicholas, Webster, and other counties immediately west of the mountains. A large amount of hemlock is scattered through the valleys and ravines of the northeastern part of the state and along the western slope of the Alleghenies. The area still occupied by white pine is estimated to extend over 310 square miles, and to contain about 990,000,000 feet of merchantable lumber. The principal centres of lumber manufacture are along the Kanawha river, at Roncevert, Greenbrier county at Parkersburg, and along the upper Potomac. The lumber product of the state for the census year was 180,112,000 feet of lumber, 12,071,000 laths, 3,695,000 shingles, 41,992,000 staves, and 1,952,000 sets of headings, valued at $2,431,857.

FOREST PRESERVATION.

The New York *Tribune* says :—It is plainly a matter of national importance that certain forest reservations should be set apart in the Government lands on the Rocky Mountains where the Missouri, Columbia, and other great rivers take rise. And California is threatened with desolation so long as the evergreen woods of the Sierra Nevada and the coast range remain unprotected. New York has just begun to appreciate the value of the Adirondack wilderness as essential to the preservation of the Hudson, and New England must throw some safeguards about the forests of Northern Vermont and New Hampshire if the Merrimack and Connecticut are to be saved. This is a forest problem which dwarfs in importance any consideration of the country's future supply of lumber or fuel. The answer we make to this obtrusive question will decide whether vast areas of this continent are to be desert or fertile. By wantonly violating the plain laws of nature man can make a healthful climate deadly, choke up navigable streams, and turn rich farm lands into an uninhabitable waste. Such destruction has been wrought in more than one portion of the Old World, and the time has come for us to heed these melancholy warnings.

SOUTHERN LUMBER.

The *Lumberman's Gazette* says :—Arkansas, Mississippi and Louisiana will soon be called to supply the deficiency in timber now so fast disappearing from the North-west, and when these supplies begin to be drawn from the dawn of prosperity will come. Georgia and Alabama have for years been the champions of the yellow pine trade, and still have immense quantities of it standing, though at the rate it is being cut down the above mentioned states will soon be brought into requisition. In the days of slavery no one thought of developing either of the great industries of the present day, nor did they think of the vast wealth in their possession. Whole neighborhoods drew their lumber supplies from the old-fashioned water-power saw mill, or the primitive whip-saw. Now, however, thousands of saw-mills, furniture factories, planing mills, spoke, handle, hollow-ware and waggon factories, cotton and woollen mills, machine shops, and every other mechanical industry carried on anywhere, find a place among southern industries.

THE CALIFORNIA SUPPLY.

The state mineralogist of California estimates the quantity of lumber cut each year in California and shipped eastward at 70,000,000 feet Cordwood is sent in about an equal quantity. The heaviest drafts on the mountain timber have been for Nevada use. The Comstock lode alone required 1,000,000,000 feet. Notwithstanding this cutting, the replenishing goes on, and no fears are felt for a lack. The Truckee basin and the region around Lake Tahoe have been resorted to most for timber of any regions of the state ; but they represent, it is said, but a small fraction of the timber-bearing surface of the mountains, say 20,000 acres out of a total of several million acres east of the main summit of the Sierra Nevada range. Estimates claim that there is timber enough on the eastern slope of the mountains, between Hope valley and Beckwith pass, to supply Utah and Nevada for half a century, not taking into the account the reproduction that is in progress.—*Lumberman's Gazette.*

PREPARING TIMBER FOR MAKING HUBS, SPOKES AND FELLOES.

After cutting the logs for hubs into convenient lengths to handle, and removing the bark, they should be immersed for a few weeks in water, if convenient to a lake, stream or pond. This will greatly facilitate the process of seasoning without injury to the timber; but this can only be done where convenient circumstances permit. The logs are then taken into the factory and cut into proper lengths by the swing saw, or by a cross cut saw; the swing saw is preferred for its accuracy, rapidity, and economy of power. After cross-cutting a hole is bored through the centre of the blocks endwise. The blocks are now dipped in a solution of lime three parts and Venetian red one part. This solution is reduced to a thin wash with salt water. This retards the seasoning of the surface by absorbing moisture from the atmosphere, so as to prevent "checking."

The blocks should now be piled on end in sheds, or otherwise covered from the sun, and also carefully protected from draughts of air. After three months of summer or five months of fall and winter weather, the blocks should be placed upon their sides, as this position will allow more rapid seasoning. If these directions are followed the blocks will be ready for use in eighteen months from the date of felling the timber. Steam should never be employed in seasoning hubs. Years of experiment convince me that the life and good qualities of the wheel are sacrificed by this mode of seasoning. Excessive heat should never be used in any of the many methods of facilitating the seasoning of timber.

White oak selected, felled and riven or split, is the most preferable for spokes; but care must be taken to fell in August and also to observe the directions for seasoning as for hubs, excepting the length of time, since the planks for spokes are much smaller than those for hubs. Some additional remarks at this point are in place.

In splitting spokes care must be had in examining the tree to see if it preserves its toughness and if the borer, the grub or larva of a wood-beetle, has commenced its work. These evidences of decay are discovered in the splitting and examination of the timber, but in no other way. Such timber must be rejected. In riving or splitting spoke timber many reject the sap-wood, but this is not necessary where the trees have been felled and riven at the proper season as indicated. Let it be noted that wood for spokes must always be split so that the spokes may have the greatest possible strength in the direction of the grain of the wood, for in this direction the greatest strain is received, The spokes should be piled carefully under cover, as directed for hubs; and they can be turned in nine months from the time of felling the trees, and finished in 30 days thereafter.

White-oak being preferred for the felloes, the tree must be of greater diameter than those from which hubs or spokes are made. The property of stiffness, in addition to toughness, is needed in felloes, and to secure this the largest trees are selected, Trees in the vigor and prime of life and free from the work of the "borer" already mentioned, which only invades wood verging on decay, are preferred; especially when the hands divide into two or more very large branches. The time for felling, as before mentioned, from the first to the fifteenth of August in the Middle States, is to be carefully noted. The logs should be immediately taken to the saw mill and cut with a band-saw to insure accuracy, this mode of sawing being also the most economical in material, time and power. The logs must be sawed, or "fitched" as the mill men express it, into slabs of the requisite thickness. The logs should first be sawed through the heart lengthwise, and then each half is laid on its flat face with the round or bark side up, and then cut into slabs by a vertical cut. This is so done to prevent "checking" in seasoning the plank, and also to furnish felloes which do not cross the heart of the wood.

The plank must be piled immediately after sawing. This piling is not the throwing of plank into a promiscuous heap and leaving them thus; for such a proceeding would insure damage from heating and dry rot; but it is the arrangement of the plank in level tiers or platforms in the pile, giving sufficient air space between the planks. This is indispensible in seasoning wood, intended for mechanical purposes. The strips used in separating the layer should be of a different wood, pine, cedar, hemlock, or any variety not inviting to insects of the borer class, and the strips should be of a common thickness in order to prevent warp or set of the plank by uneven bearings and weights. Workmen need the supervision of intelligent oversight in this matter, for their knowledge is not always equal to a task in which science itself is at fault. The air spacing should be greater or less according to the surroundings.

To season timber is not to bleach it; and rain and sunshine are not needed, but should be carefully avoided to insure solid fibre in the wood, as well as save the time and patience of the workman. Where the planks are piled without spacing-strips, the grub of a large black beetle works between the adjoining faces of the plank and eats large grooves in the timber. The spacing-strips should be at least three-fourths of an inch thick by two inches wide, and three sticks or strips are required to support plank 12 feet in length—one strip across the middle and the other strips near the ends of the plank. For longer plank more support is needed.

Felloes cut from the green or unseasoned plank require more hauling, are very liable to warp and become unfit for the intended object. They also lose a considerable per cent of their strength which would be retained in the form of plank and in the manner referred to.—*The Blacksmith and Wheelwright.*

NEW ENGLAND TRADE.

BOSTON, March 22.—Our Boston wholesalers are a busy lot of men. The renewed activity of trade shows itself in many ways. The dealers are inclined to joke when one meets them at their offices, or on the street, and that is a sure sign of good feeling. Out of town trade is every day increasing, and is vieing in importance with the city trade. A certain few of the wholesale men make this branch of trade a specialty, paying little attention to the city business. Boston long since ceased to be a distributing point, the lumber being in most cases forwarded direct from the west to the consumer in the inland towns. Several wholesalers are now located at Worcester, while Springfield has become quite a centre for the lumber trade of western New England. New Haven has several large wholesale houses, and probably the largest retail yards. Other points along the Sound shore are well represented in the lumber industry. The yards are largely supplied by Albany dealers, and are stocked almost entirely during the time that navigation is open, and freight rates by water are so low that competition by rail is out of the question, save in a few instances, on some special grades or dimensions. During the winter months car-load lots are taken on by dealers who find themselves short of certain grades. A peculiarity of trade in this section is the prevailing custom of buying lumber in the rough. Distant readers of the *Lumberman* may wonder why I say "peculiarity." It is such, as compared with Massachusetts trade, particularly around Boston, where dealers buy their lumber very largely dressed to order. Few yards have mills attached, and the price on pine by car-load being the same dressed as in the rough, dealers buy that way.

Spruce is moving very fairly, and orders are plentiful. Parties with whom I have talked, are certain of a good trade, and with present prices must reap a fair profit. If I were to put it any stronger than this probably many mill men might object, for it is a most uncommon thing to hear a spruce manufacturer admit he over made a dollar in the business. He struggles with it out of love for the business.

Yellow pine is moving well. Prices are firm, and some very nice cargoes are being landed. Our local dealers are well prepared for any trade that may come, and suburban trade is well looked after by the wholesale men. Providence, R. I., is fast becoming a point in the yellow pine trade, and at New London, Conn., Bentley & Young are handling immense quantities. James & Abbot, of Boston, make a specialty of boards, and have in stock an immense amount—probably several million feet. C. W. Hall also handles large quantities, and has lately contracted for several mill orders. Wicker & Blade, also George H. Peters & Co. and Stetson & Mosely are each extensive handlers of yellow pine, and supply a large share of the New England trade.

The white pine trade is moving along very satisfactorily. Some very nice lots are now on track at the railroads, largely shipped on order. Prices are firm, and there seems not the least indication to shade prices on lumber that is consigned. Possibly, there may be an occasional exception to this statement. Boston has a few commission men who enjoy the notoriety of being "skinners," a very unwholesome cognomen, but local traders know full well its definition. Wholesale men cannot refrain from buying of these men when car lots are offered them at less figures than they (the wholesalers) could lay it down for in Boston. We are cursed with a few such sellers. They are always in a strait for money, and if they can't swap checks with somebody they sell a car of other folks' lumber at a ridiculously low figure. Somehow these low sales are known by everybody. If a wholesaler obtains a good living figure for his goods, it is kept as much a secret as though an oath had been taken not to reveal it.—*Northwestern Lumberman.*

MAINE PROSPECTS.

The *Northwestern Lumberman* says:—A local paper thus describes the condition of the market at Lewiston, Me. "The severe weather of the past winter has had a depressing effect on the lumber business. The Lewiston dealers report an unusually light winter demand, and some of them have large stocks on hand. 'We had $30,000 worth of stuff, when we stopped running, and we haven't made much of a hole in it,' says one. Spruce is low, and the stock is large in all parts of the country. Carload stuff is selling at from $13 to $13.50, and easy orders are placed at $13@14. The winter has been a good one for lumbering, and it will require only a successful driving season to make spruce lumber very abundant at the mills. The outlook is for low prices. Lumber dealers from St. John say that the outlook for the export lumber trade is not favorable. Lewiston has bought considerable southern pine since last fall. Ordinary building orders for this stock are now placed at $21 long and wide beams at $28@30. The prices on said orders now range from $28 to $30. Floorings are easy at $28@30; floorings, kiln-dried and dressed, and shipped by rail from the South, are now sold here at $38 @40. Cedar shingles are quiet and lower at $4 for extras, and declining about 50 cents each for the lower grades. Hardwood lumber is rather firm for all grades."

LITIGATION ABOUT A LUMBER VESSEL.

OTTAWA, March 21.—The Supreme Court was occupied to-day in hearing the argument in the John Owen appeal case. This is an appeal from the Maritime Court of Ontario, John Emory Owen, defendant in Lower Court, being appellant; D. B. Odette and H. W. Wherry, plaintiffs, respondents. Plaintiffs filed a petition in the Maritime Court to recover damages for destruction of their vessel Minnie Morton by a raft in tow of defendants vessel John Owen, and the Surrogate Judge of the Maritime Court decided that defendant's vessel was solely to blame for the collision, and assessed damages at $2,600. From this judgment the present appeal was taken. Mr. McCarthy appeared for appellant, and Mr. M. A. McHugh, of Windsor, Ont., for respondents. The petition avers that the John Owen was a vessel of 328 tons, and the Minnie Morton a vessel of 30 tons. At the time of the accident the latter was lying at the head of Bois Blanc Island, in Detroit River, and the John Owen was bound down by a raft of logs, when that master negligently steered nearer to the island than he should have done; that the Owen, on account of the size of the raft, was unable to exercise proper control of it; that the raft was carried by the current against the Morton, the latter becoming entangled among logs and carried out into Lake Erie, where she sank. She has not since been found. The accident occurred on the night of the 1st of October, 1881. Mr. McCarthy, for the appellant, contended that the collision was due to negligence on the part of the master and crew of the Morton in allowing their vessel to be anchored in the way of vessels and rafts, which were passing up and down stream at all hours of the day and night; that large rafts passing Bois Blanc Island required nearly all space navigable at that point; and that the Morton at the time of the accident, was lying in the channel without look-out or watch of any kind and without sufficient lights. He further contended that the Morton, lying at such an unusual place in a navigable stream, ought to have been manned so as to have been easily moved out of the way of passing vessels or rafts lawfully using the stream, and that she might have avoided danger had a proper lookout been kept. When an accident occurred without blame to any one, the loss should be borne where it falls, and even if it were shown that the Owen was at fault the damages awarded were excessive. Counsel for the respondent argued that had the Owen pursued a course nearer to the eastern bank of the river, as she should have done, the raft would have avoided the current, and that the raft was too large to be controlled by the tug. He quoted from evidence to show that the Morton was anchored out of the line of navigation, her position being designated by a bright light, visible for two miles. In the position she occupied a lookout was unnecessary, and the accident was due solely to the improper course of the tug. Evidence of experienced vessel-owners, shipbuilders, etc., showed that the Morton at the time of the accident was worth from $3,000 to $3,500, and that she was chartered for $70 per day. Mr. McHugh quoted authorities to show that this Court should not interfere with the finding of the Court below upon questions of fact, and urged that the appeal be dismissed with costs. The argument was not concluded when the Court rose. The Supreme Court will adjourn to-morrow until Tuesday next.—*Globe.*

MICHIGAN LUMBERING.

"Lots of snow around here, yet, I see; but not half as much as where I have just come from."

The speaker was a rugged and muscular man, with face of bronze, clear eye and lively tongue; one who might pass for a sailor home from a foreign voyage.

"And where do you hail from?' was asked by the person addressed.

"Saginaw Valley," he replid, "I've been up there all winter in the lumber camp, on Coldwater Creek. When I left, day afore yesterday, the snow was four foot on the level."

"That makes heavy hauling, eh? Much doing this season?"

"More'n ever; I never seen so much," he replied, "People think the woods are getting cleared out. Pshaw! you can go for miles and miles yet through the prettiest pines you ever see. We had a right smart season all through. The logs ran three and three and a half a thousand, and that gives a chance to make something, you see. When they take seven and seven'n a-half they're mighty small sticks and take a heap of handling; does'nt pay so well."

"Lumbering is pretty hard work, anyway, is it not?"

"Wal, kind of at first, till you get used to it. The men put in about 18 hours a day mostly—up at two o'clock in the morning, and keep at it till they can't see at night."

"How do they see to work in the morning so early?"

"Torches! Man dear, the woods are all lit up, and the gangs go at it hours before day. When you're banking logs, its got to be done. I've seen loads hauled four miles and a-half and a second trip started on afore daybreak. Do the men get good wages? Well, $25 and $30 a month, which is more than the same men can get lying round in town, anyway. Feed 'em well? You better believe they do! The very best of everything. Plenty of fresh beef and pork, and the bakers in the woods make as good bread as you get in town. The camp cooks get $60 a month, and are first-rate. Oh, they give you all the pies and cakes you want. It used to be the other way. Pork and beans was the stiddy dish. Now-a-days the firms must feed the men well, or they will leave for other camps.

It's a trouble to get men, and they will have to be well used. When I was leaving the bosses were hiring men over again for the summer."

"What, are they going to work all the year round in the lumber camps?"

"Yes; you see the season makes little difference, now they are using railroads for hauling logs. My, yes! they're laying down tramways through the bush, and will use locomotives in place of horses. The men don't want to live in the woods in summer time. They can do better at farm or town labor. The Canadians who are over there have just gone for the winter, and most of them will be back home when the snow goes. There's plenty to do in this country now; not as it used to be."

"Are there many Canadians in the Michigan wood?"

Oh, nearly all of 'em."—*London Free Press.*

WINNIPEG PROSPECTS.

The *Commercial* of March 20th, says:—In the prices of building material no great change is anticipated, but what alterations there are will certainly be in the direction of a lower price. Lumber will, it is expected, be lower than it was last year, owing to the increased production, and the improved facilities for bringing the out-put of the mills in our own country to market. The beginning of the Thunder Bay branch and the opening of lake navigation will allow the product of eastern lumber to be brought through our own territory, and save the round-about all-rail route via. Chicago and St. Paul. Prices of American lumber are also tending downwards consequent upon the tremendous production in the Northern States. Lumbermen there are showing signs of alarm lest there be an over-production which may cause a big tumble in prices—so much so that at a recent convention of lumbermen in St. Paul, it was decided in another season to limit the production to a certain extent and thus ward off the possibility of a glut in the market, and a repetition of the stagnation in the trade which occurred a few years ago in the eastern parts of the continent.

BAND SAW MILLS.

The Indianopolis *Woodworker* says:—The growing scarcity of all the fine cabinet woods and consequent increased value, warn the manufacturer that he must convert his timber into boards at the very least possible expense of sawdust. Whilst the saving of lumber in the process of sawing is the principal economic argument in favor of the band saw, it is not the only one. The lumber manufactured by it is of more uniform thickness, and has a smoother surface, and consequently sustains less loss in planing. The width of the lumber is only limited by the size of the log. The annoying "offset" found on all wide boards sawed by the double circular is, of course, entirely absent. The saw being much thinner than the circular or mulay, the power is proportionately less; the kerf being about one-fourth that of the circular, the power required to saw a given amount of lumber should be one-fourth.

A recent visit of a *Wood-Worker* representative to the band saw mill of Hoffman Bros., Fort Wayne, Ind., was well repaid by the very interesting exhibition of fine sawing witnessed. Band mills have already taken the place of circulars to a certain extent in the manufacture of the finer grades of lumber, and the probability is that the day is not far distant when they will come into common use. The mill referred to has wheels six feet diameter, with wooden rims, covered with India rubber. The upper wheel is carried on a steel shaft, hung on an adjustable frame, with attachments for controlling the saw within easy reach of the operator. The vertical adjustment of the upper wheel controls the tension of the saw, and is governed by a weighted lever resting upon a screw fulcrum, compensating for the expansion of the saw and maintaining uniform strain. The guides are of brass and steel, with hardened steel rollers to receive the back-thurst of the saw. The upper guide is hung upon two hollow stems, the whole being counterbalanced so as to be easily raised or lowered to suit the size of the log. The driving pulleys are 30-inch diameter, 12-inch face, the loose one babbited and fitted with suitable oil cups. The feed works are models of simplicity and efficiency, consisting of V-shaped friction cones and wheels, and capable of instantaneous change from slowest to fastest speed. The levers and appliances are so arranged that the head sawyer can, without leaving his position, start and stop the mill, control the tension and back-thrust of the saw, adjust the guides, and change the feed from slow to fast or forward and reverse.

It is necessary that the saws be made of the very best quality of steel, and that the exact temper required be perfectly uniform throughout. They must also be straight, true, and of same guage over their entire length. To meet all these requirements demands great care and skill in the manufacture. The Hoffman Bros. have all their blades made in France, according to their own specifications and directions. The breakage on these French blades is inconsiderable, and in case one does break, it is but the work of half an hour to repair it when suitable apparatus is at hand.

The carriage is the ordinary side-cutting form, similar to those used on circular mills, and is mounted on axles and trucks which run on V-shaped track planed true. The setworks have a patent set, by which the thickness of board may be fixed to the smallest fraction of an inch.

TORONTO NOTES.

The *Mail* says that it is probable that the supply of timber this season will be somewhat small, and will not, at any rate, exceed that of last year. The cost of production to those in the business will be considerably more, owing to the great amount of snow in the woods and the consequent increase in the cost of lumbering operations. In the Muskoka and northern lumbering districts the snow is said to be over five feet on the level, and a large portion of the time of the gangs is consumed in shovelling. Some of the timber merchants think that their stocks will cost $1.50 per M. more than they did last year. On the other hand, there have been so far no inquiries for timber for the States. A number of new stocks have been sold, and at prices quite up to those of last year, but they have been purchased by dealers here. As but few sales have been made for the States as yet, it would be premature to say whether last year's prices will be sustained or not. It is not hoped in any case that there will be an excess in quantity as compared with the stocks of last year, but on the other hand the indications are that the demand will not be so great. Though the cost of production may be increased as compared with last season, dealers think that it does not follow that the prices will be increased or even sustained, as the demand will regulate that. The dealers are not unanimous in their opinions on these points, but will be able to speak with greater confidence in the spring. It is satisfactory to know, however, that there appears to be no great danger of a serious advance in prices.

ARTIFICAL SEASONING OF LUMBER.

The advantages of seasoning lumber by artificial means are too well known and appreciated at the present time to require extended argument in favor of the system. It is a subject of more than ordinary interest to lumbermen just now, for the reason that the natural changes in the methods of doing business actually necessitate some quicker process of drying lumber than open air seasoning. Saw mill men, especially, whether sawing the white pine of the northwest or the yellow pine of the south, are beginning to more than ever realize the importance of the planing machine and the dry-kiln as factors in the successful prosecution of their business. Long shipments by rail can not be made profitable unless the product to be transported is first shorn of every pound of superfluous weight. Shavings, edgings and trimmings are more profitable as fuel than when added their extra weight to a consignment of lumber destined for a distant dealer, who will not pay as much for the rough as for the dressed material.

The same is equally true regarding the surplus moisture contained in green or half dried lumber. The shrewdest lumbermen in this country can not make it profitable to pay all the way from 18 to 40 cents per hundred pounds on water, and every thousand feet of green white pine lumber, fresh from the saw, contains 2,000 pounds of moisture that a few days treatment in a dry-kiln will expel from it. In yellow pine and the various hardwoods the necessity for drying becomes greater in proportion to the difference in weight.—*Woodworker.*

WELL AS EVER.—Lottie Howard writes from Buffalo, N.Y.:—"My system became greatly debiliated through arduous professional duties; suffered from nausea, sick headache and biliousness. Tried Burdock Blood Bitters with the most beneficial effect. Am well as ever."

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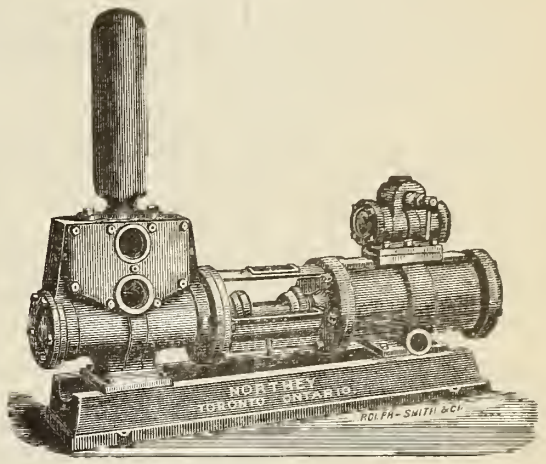

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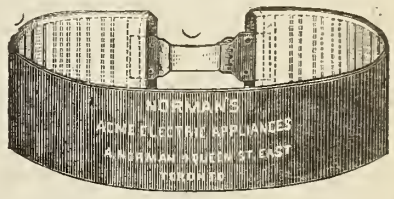

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ONTARIO TREE-PLANTING ACT.

The following is a copy of the Tree-Planting Act passed at the last session of the Ontario Legislature, and will no doubt prove interesting to many of our readers :

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows :

1. This Act may be cited as "the Ontario Tree-Planting Act, 1883."

2. Chapter 187 of the revised statutes of Ontario is hereby repealed.

3. Section four of this Act shall not apply to any incorporated city, town, or village, unless the Council thereof first passes a by-law making the same apply thereto.

PLANTING TREES.

4. Any person owning land adjacent to any highway or to any public street, lane, alley, place, or square in this province, may plant trees on the portion thereof contiguous to his land ; but no tree shall be so planted that the same is or may become a nuisance in the highway or other public thoroughfare, or obstruct the fair and reasonable use of the same.

(2) Any owner of a farm or lot of land may, with the consent of the owner or owners of adjoining lands, plant trees on the boundary lines of his farm or lot.

(3) Every such tree so planted on any such highway, street, lano, alley, place, or square, shall be deemed to be the property of the owner of the lands adjacent to such highway, street, lane, alley, place, or square, and nearest to such tree ; and every such tree so planted on a boundary line aforesaid shall be deemed to be the common property of the owners of the adjoining farms or lots.

(4) Every tree now growing on either side of any highway in this province shall upon, from, and after the passing of this Act be deemed to be the property of the owner of the land adjacent to such highway, and nearest to such tree, shrub, or sapling.

MUNICIPAL BONUS.

5. The Council of any municipality may pass a by-law for paying out of municipal funds a bonus or premium not exceeding twonty-five cents for each and every ash, basswood, beech, birch, butternut, cedar, cherry, chestnut, elm, hickory, maple, oak, pine, sassafras, spruce, walnut, or whitewood tree, which shall, under the provisions of this Act, be planted within such municipality on any highway or on any boundary line of farms as aforesaid, or within six feet of such boundary.

(2) Such by-law shall furthor provide for the appointment of an inspector of trees so planted ; for their due protection against injury and against removal by any person or persons, including the owner, excepting as authority may be given therefor by special resolution of the Council ; for the conditions on which bonusos may be paid ; and generally for such regulations as are authorized by chapter one hundred and seventy-four of the Revised Statutes of Ontario, section 454 (16).

(3) Printed copies of the said by-law, together with sections four, five, six, and seven of this Act, shall be posted throughout the municipality, and all claims made to the Council under the provisions of the by-law shall be referred to the inspector to obtain proof of the same and report thereon.

DUTY OF THE INSPECTOR.

6. The Inspector shall make to the Council one report for each year, if required so to do giviug the names of all persons entitled to any bonus or premiums under the by-law, the number of trees of each species planted, and the amount of bonus or premium to which each person is entitled, and certifying that the distance between any one tree and the tree nearest thereto is not less than thirty feet, that the trees have been planted for a period of three years, and that they are alivo, healty, and of good form ; and upon the adoption of such report the bonuses or premiums shall be paid.

PROVINCIAL TREE-PLANTING FUND.

7. The Treasurer of the Province, upon receiving a copy of the inspector's report, certified by the Reove and Clerk, shall recoup to the Treasurer of the municipality one-half of the the sum paid by the municipality under the authority of this Act, the said copy to be forwarded on or before the first day of November in each year.

8. The sum of fifty thousand dollars is hereby apportioned and set apart for the object of the foregoing section, and shall be known as "The Ontario Tree Planting Fund."

PENALTIES.

9. Any person who ties or fastens any animal to or injures or destroys a trce planted and growing upon any road or highway, or upon any public street, lane, alley, place, or square in this Province (or upon any boundary line of farms, if any such bonus or premium aforesaid has been paid therefor), or suffers or permits any any animal in his charge to injure or destroy, or who cuts down or removes any such tree without having first obtained permission so to do by special resolution of the Council of the municipality, shall, upon conviction thereof before a justice of the peace, forfeit and pay such sum of money, not exceeding twenty-five dollars besides costs, as such justice may award, and in default of payment the same may be imprisoned in the common gaol of the county within which the municipality is situate for a period not exceeding thirty days.

(2) One-half of such fine shall go to the person laying the information, and the other half to the municipality within which such tree was growing.

TREE BY-LAWS.

10. The Council of every municipality may pass by-laws :

(1) To regulate the planting of trees upon the public highway.

(2) To prohibit the planting upon the public highways of any species of trees which they may deem unsuited for that purpose.

(3) To provide for the removel of trees which may be planted on the public highway contrary to the provisions of any such by-law.

SPRUCE LOGS.

Mr. Ives, In the House of Commons on Wednesday, March 14th, introduced a resolution declaring it expedient to consider the question of an increase of the export duty on spruce logs exported from the Provinces of Ontario and Quebec. There was nothing new in the principle in his motion. He said there was already a duty, and the only question was as to whether it should be increased. As it was, thore was an export duty of $1 per thousand. The Americans, on the other hand, enforced a duty of $2 a thousand upon all sawn lumber. Thus there was a bounty of $1 per thousand in favor of carrying our logs across the line and manufacturing them in the United States.

Mr. Benson thought the principle should be extended to all kinds of saw-logs. Unless this was done, our own shingle and other manufacturers in wood would have to give up the business altogether.

Sir Loonard Tilley said the Government had the matter under its consideration. One of the difficulties it had to deal with was the question as to how the change would affect persons who had already mado contracts and were cutting logs for the prosent season.

Mr. Charlton said tho increase of export duty for the advantage of a few saw-mill men would bo most unjust, and would operate in favor of a fow mill owners to the disadvantage of a great number of farmers and dealers in logs. The export duty already was a measure of protection for Michigan lumbermen. If it was not for that duty, the lumbermen on the Georgian bay would be in a position to export their lumber in great quantities to the markets of Toledo and of the United States generally. Besides, the increase of export duty might invite reprisals on the part of the United States, and would prejudice our chances of getting American import duties on Canadian lumber removed. Should America decline to remove that duty, it would, in view of an increased export duty, be but poetic justice.

Mr. Ives said the House was accustomed to hear an annual speech on the follies of protection from the hon. member for Norfolk, and he supposed his motion had afforded the opportunity on the present occasion. In many cases the Government had applied protection where they believed it would have the effect of increasing the price, in the belief that the matter would soon regulate itself, and the result had been as they anticipated. This had had the affect of furnishing more work, creating a larger market, and giving increased consumption. The effect of the proposed increase in the export duty on logs would not decrease their value to the seller but the very contrary. As the law now stood the American mauufacturer was able to pay one dollar per thousand more than if this extra duty were put on, and if it were imposed the effect would be that the American manufacturers would bring their machinery and capital to this country to manufacture the lumber, instead of it being taken out of the country.

Mr. Mitchell said he was a National Policy man, but he was not prepared to adopt the arrangements under which the markets to which men who had invested their money in lumber looked would be closed against them. He did not approve of hampering the lumbermen, and he only hoped that the Government would remove the duties on cornmeal and pork, which were injurious to the lumber trade in the Maritime Provinces. This, he thought, could be done without impairing the revenue or violating the National Policy, which had done such a great deal for the country.

Mr. Cook said that this proposal, if accepted, would strike at the fundamental principle of the lumber trade, which was to find a ready market for its produce. But it was not only the lumbermen who would suffer. The farmer who owned lumber on his farm would be injured. He did not rise so much to refer to that point, which had been ably dealt with by the member for North Norfolk, as to protest against the use of the term speculators, as descriptive of lumbermen. If the lumbermen were mere speculators, what were the men to whom the lumber of the North-West was being given, not by public competition, but by private arrangement? So far as he was concerned, the duty would not affect him to any extent, for he exported his lumber in the manufactured state, and sent his sawn logs to England. He, however, hoped the Government, instead of increasing the duty on logs, would remove it altogether.

Mr. Sproule said however accurate the views of the member for Northumberland (Mr. Mitchell) might be as applied to the Maritime Provinces, they were not applicable to his part of the country. The remarks of the hon. member for Simcoe (Mr. Cook) regarding speculators in timber limits in the North-West came with very bad grace from him—(hear, hear)—for he was connected with one of the most extensive firms in the lumber trade ; not only that, but he was a great monopolist, and it had been found impossible, out of numerous mills in the district, to find many that were not controlled by tho Cook Bros. (Hear, hear.) Beyond this, he might remark that it was a mistake to suppose that farmers in the Georgian Bay district had large quantities of timber, and that the export duty would affect them. The Ontario Government took good care that they should not own valuable timber. (Hear, hear.) In fact, they gave the timber into the control of their favored monopolists by a peculiar manœuvro. A few years ago the Government of Mr. Mowat offered the limits for sale by public competition. It was understood that the supportors of the Government would buy in these limits at a figure that fair competitors could not afford to pay for them. After a time these men said they could not make their operations pay, and their limits fell into the hands of the Government, and were passed over at a reduced price to the persons on whose hands they now were.

Mr. Bolduc thought it would be in the interest of the trade if a duty of $2 per thousand were placed on all classes of logs exported.

Mr. Scriver said that in his constituency spruce timber was owned by farmers, and of necessity they were obliged to draw their logs across the line to find a market. He believed the increase of duty was in the interest of a few mill-owners and at the expense of the large class of agriculturists.

At the suggestion of the Minister of Finance the motion was withdrawn.—*Mail.*

AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett, & Co.'s report, dated Melbourne, January 17th, says :—Since last issue holidays have considerably interfered with business, the demand for all descriptions of timber being on a smaller scale than formerly. The large arrivals from Sweden and Norway have had a depressing effect on the market, and dealers are afraid to operate at present, prefering to wait the turn of events and reduce their stocks in the meantime. American lumber.—This line continues in good demand, and all parcels offered have realized prices fully sustaining late rates. We report sales of Michigan clear, 1¼ to 6 in., £17 2s. 6d. to £18 7s. 6d. : w. p. shelving (good), £11 2s. 6d. ; inferior, £9 17s. 6p. ; w. p. t. and g. ceiling, £9 5s. to £9 2s. 6d. ; 7-8 in. dressed clear shelving, £16 5s. to £16 7s. 6d. ; 1¼, 1½, and 2in. Canada clear, £14 10s. to £15 per m. super, the trade holding stocks only sufficient for present requirements. Norwegian and Scotch flooring.—The imports aggregate 8,604,804 ft. lineal. This quantity, combined with stocks in store, is beyond our requirements for some time, notwithstanding that the consumption continues on a large scale. Late sales show a falling off from last month's rates.

Messrs. C. S. Ross & Co. report :—Since departure of Rossetta, on 20th of December, the sales of timber have not been large, but it is evident that the numerous arrivals and the high rates for money have induced caution, and the deliveries for consumption are considerably less than at last advice. The imports for the month have been very heavy, and in some lines the arrivals during the past six months have been equal to the imports of the previous twelve months, and a large portion of this season's landing will be in stock to meet the arrivals in January, 1884. The very low freights from the west coast of America, and moderate freights from Norway, have induced excessive shipments of Oregon timber and flooring boards, and the quantity of red deals, from Sweden, is also beyond the rate of consumption. The great difficulty at present experienced is in the landing of cargoes, many vessels waiting from a week to a fortnight for a berth. It is almost unnecessary to state that nearly every liue is sold at considerably less than the cost of importation. In addition to cargoes intended for this port, several cargoes on Adelaide and Sydney account have been ordered here, adding to our heavy stock, and tending to lower prices. It is impossible to forecast the end of the present large stock, but we anticipate that if money remains at present rate we do not require any red deals or flooring from Norway or Sweden for the next twelve months, as there will be a serious decline in the consumption.

New York.

The New York *Bulletin* of March 13, says : Thus far this week the general movement has been moderate, and without the development of new features over the condition of the market. In a general way consumption is now on the increase, and a steady growth may be expected as the season becomes more open, but necessity governs the action of all buyers and little or no investment against the future takes place. Dealers in consequence are not inclined to add to their yard stocks with freedom, and are particular in the selection of quality, the result of which is a failure to give any anxious attention to random offering from first hands unless something unusually attractive is shown. Agents, however, are getting a fair number of specifications for both building and manufacturing cuts, and can in most cases secure full bids.

Messrs. Brouse & Wood, who have a saw-mill and timber limit at the mouth of Bad Throad River on Lake Winnipeg, are getting out tamarac piles from 20 to 25 feet long, some of which are for the docks at Selkirk, and the balance will be left here for sale. There are also getting out 20,000 ties for the Winnipeg Street Railway and 1,500 cords of wood for the North-West Navigation Company, together with 4,000,000 shingles, 500,000 laths and about 5,000,000 feet of lumber, which will be disposed of at Selkirk.

Erysipelas, Scrofula, Salt Rheum, Eruptions, and all diseases of the Skin and Blood are promptly cured by Burdock Blood Bitters. It purges all foul humors from the system, imparting strength and vigor at the same time.

Chips.

THE Montreal *Gazette* says:—The market remains steady and values are maintained all round, with talk of an advance on some kinds of hardwood.

L. C. GULICK, agent for the Western Union Telegraph Company, is buying poles at Duluth, 4,000 having already been shipped and 20,000 being the intended number to be secured,

UNDER the heading of Regina the Winnipeg *Commercial* of March 13, says:—As an evidence of the activity in building we might mention that one of the seven merchants sold $13,000 worth of lumber during the forenoon of Monday last.

PERSIA, Russia, Spain, Greece, Palestine, Switzerland and other countries are suffering in consequence of the destruction of their forests. We should profit by their sad experience, and take care of our forests before it is everlastingly too late.

AN Ottawa correspondent says:—Messrs. Barnet & Mackie, of Pembroke, have purchased from Ross & Co., Quebec, three limits on the Sturgeon River, Nipissing, the whole comprising one hundred and ten square miles. The price paid was over $10,000.

THE *Lumberman's Gazette* says:—Chicago City is pig-headed enough to tax lumberman $100, and the men interested propose to see if the action is legal. They say they are anxious to know "if the city is to be run entirely in the interest of the whiskey ring."

THE Trenton correspondent of the Belleville *Intelligencer* says:—Messrs. Gilmour & Co. have about 200 men employed in making the necessary alternations in their large mill, in order to be ready to commence cutting lumber on the opening of navigation.

IN the Bill for the consolidation of the Dominion Lands Acts there occurs the following clause relating to timber lands:—"The renewal of a lease shall not be given in any case where the lessee has failed to pay any ground rent, royalty or other duties in connection therewith."

The Winnipeg *Commercial* of March 13, says: As the building season approaches there is freer inquiry: Prices are: Sheeting, $28; common dimensions, $30 to $32; fencing, $28 to $34; stock, $33 to $40; flooring, $35 to $45; graded clear, $50 to $70; shingles, $4.50 to $6; laths, $5.

THE *Northwestern Lumberman* says:—Much of the charcoal used by the Menominee, Mich., Furnace Company is made of pine slabs, which are conveyed from the mills to the coal pits on a tramway. It is refreshing to know that some of the waste at Menominee does not go to the refuse-burner.

MESSRS. Boyd, Caldwell & Co. have in course of erection at Caldwell Lake, near Wilbur Station, on the line of the Kingston and Pembroke Railway, a new saw mill which is intended to run by steam power, and is calculated for a cutting capacity of between 30,000 and 40,000 feet per diem.

The Rat Portage correspondent of the Winnipeg *Commercial* says:—Mr. Bayne, D. L. S., arrived here lately from Lac Seul, where he has surveyed a large timber limit for eastern lumbermen. There will be 400 men employed in connection with the two large saw-mills now approaching completion at this point.

A LANDOWNER on Cape Cod, Massachusetts, says that he owns about a hundred acres of land, of which some was so poor that it yielded nothing put poverty weed. In 1851 he commenced planting pine seed, continuing for ten years, and now he has about eighteen acres of quite valuable woodland, which was worthless before.

THE Swedish correspondent of the *Timber Trades Journal* says:—The export of sawn and planed wood from the Gefle Custom House district amounted to the comparatively moderate total of 87,690 Petersburg standards in 1882, showing scarcely an average quantity. Of this, about half was sent to Great Britain, after which in consecutive order come France, Belgium, and Australia. To the latter country twenty-two cargoes were sent, with an aggregate cargo quantity of about 7,500 standards.

REPORTS from the au Claire district, Wisconsin, are to the effect that "breaking camp" has already set in, and that about 80 per cent. of the anticipated log crop is probably a fair estimate. The snow is disappearing gradully and the indications are favorable for an ordinary freshet and a successful running of logs to the booms.

WHEN the interior of the island of Mauritius, upon which the forests were cut down that the cleared land might be used in sugar cultivation, was densely wooded, a large portion of the rain water was retained, and filtration was so gradual that even in the dryest places the lagoons received regular supplies of pure water. Now the greater part of the rain water is carried away to the sea, and in dry weather the sun's rays beat down on slimy, fetid marshes.

THE lumber manufactured on Lake Winnipeg this year is expected to amount to about 35,000,000 feet contributed as follows: Brouse & Wood, 2,000,000; Dick & Banning, 5,000,000; Brown & Rutherford, 3,000,000; Drake & Rutherford, 4,000,000; Walkley & Burrows, 6,000,000; H. G. Stubbs & Co.. 3,000,000: Jonasson & Frederickson, 2,000,000; Shore & Co., 2,000,000; Schnider & Co., 3,000,000; with two mills to hear from.

A FEW of the Michigan lumbermen who have cleared their land of pine are now converting the hardwood that is left into charcoal. They think it pays better to even make the maple into charcoal than to saw it into lumber, for in coal-making all the limbs, as well as the trees that would be poor sawing material, can be utilized. A cord of dry wood will make from 40 to 50 bushels of charcoal, which sells, on an average, for about eight cents a bushel.

The *Lumberman's Gazette* says:—The establishmement of the stave and heading factory at Otter Lake is proving a great benefit to the neighboring farmers, if one may judge from the large quantities of bolts laid down in the yard daily. And some are teamed a distance of twenty miles! Besides those delivered at the factory, hundreds of cords are being piled up along the line of the Michigan Central and Flint and Pere Marquette railways as far south as Oxford and east as Geneseeville.

THE *Timber Trades Journal* says:—The promised limitation in the log cutting at Sweden is a step in the right direction if properly carried out, and other places ought to follow this example. At present we only know that such an arrangement has been made; whether it will stand, should trade brighten is quite problematic. The great drawback to trade is the heavy consignment cargoes thrown on the market one after another without reserve, and it is these which do much to keep values at a low level.

THE weather in Sweden has been very unfavorable for forest work for sometime past, and the *Timber Trades Journal* learns that it is very difficult to drag the logs out of the woods, the thaw having partially melted the snow. Without the ground is first frozen, we are informed, the snow in those latitudes has but an insecure foundation, owing to its mass, and as the fall preceded the frost when winter set in, and was unusually heavy, the work in the part of Sweden referred to is greatly impeded.

THE *Northwestern Lumberman* says:—Remarkable stories are encountered in the traditions of the woods. The latest and perhaps the toughest, is to the effect that in the heart of an oak tree, a Bucksport, Me., chopper found a diamond pin with 24 brilliants. The tree is supposed to be 120 years old. About everything has now been found, at one or another time and place, imbedded in trees, except patent medicine advertisements, and this omission is the most singular feature of the phenomena.

THE *Lumberman's Gazette* says:—It is astonishing what an amount of logs other than pine are being harvested this winter. Ash, basswood, elm, hemlock, maple, sycamore and every species of timber is being piled up at every station on the F. & P. M. railroad from Bay City to Rced City, and the same is the case on the line of the Michigan Central all the way from Mullet lake to Owosso. In cedar also, and especially in hop polcs, thero is most wonderful activity, and the aggregate of all the hardwood, so-called, is certain to augment materially the volume of business in all this section.

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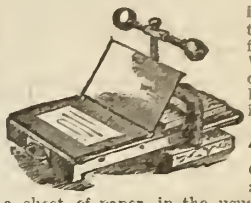

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PETERBOROUGH, Ont. APRIL 2, 1883.

WINONA lumber dealers have orders from Dakota for 400 carloads of lumber, which will be shipped when the cars can be had.

FOUR rafts of walnut logs, valued at nearly $100,000, arrived lately at Chattanooga, Tenn., by river, from the Virginia mountains.

A LARGE quantity of tamarac poles are being gotten out at Alpena, Michigan. These are to be used by Lake Erie fishermen for trap nets.

HARDWOOD timber is being brought to the Dixville mill by Messrs. J. J. Parker & Co., in quantities larger than has ever before been taken there in any one winter.

THE Parry Sound *North Star* says:—Some of the lumber camps are now breaking up, and preparations are being made for starting the drives at the earliest possible moment.

As the debate in the House of Commons on the export duty on spruce logs must be of interest to our readers, and was considerably mixed up with political questions, we have given the reports both of the *Globe* and *Mail*.

THE *Timber Trades Journal* says:—We are informed that two of the leading Gefle houses have already succeeded in placing something like 12,000 standards of their production on the basis of £11 10s. This appears to be corroborative of our remarks a week ago, that shippers in Sweden were still disinclined to make any serious concession on their first quotations.

IN speaking of large trees, *Wood and Iron* says that the big trees of California are overtopped by the peppermint trees (*Eucalyptus piperita*) of Australia. Baron F. Von Mueller, of Melbourne, describes one of the gigantic height of four hundred and eighty feet. Prof. T. K. Bruner says: "It is well known that North Carolina comes next to the great west in the production of trees. Major Bomar of that state, has just felled a chesnut which measured nine feet in diameter. A gentleman and lady may walk through the trunk without getting near as close as they do at a lawn party. This tree was a sapling when Columbus was sailing westward in search of the undiscovered world."

THE *Lumberman's Gazette* says:—No Muskegon lumberman has put in the full amount of logs he figured on at the beginning of the season. They are all short of their calculations, and the total shortage on the intended crop will reach fully 150,000,000 feet, says the Grand Rapids *Democrat*; but winter "still lingers," and this shortage scheme is being shortened up with most wonderful celerity.

THE Orillia *Packet* says:—Mr. R. R. Weir closed the last of his shanties last Friday, though several jobbers are still at work completing their contracts. He has about four million feet of logs out for his mill on the Black River, at Fawkham, and half a million to be cut at Mr. Tasker's mill, Uhthoff. Mr. Weir expects that water will be abundant for river-driving this spring. His mill at Fawkham will be in oporation by the first of next month.

A WRITER on the future of the lumber industry argues that the south is destined, sooner or later, to supply the timber demand of South America and the West Indies. The forests of Alabama, Mississippi and of Eastern Texas are nearer the plantations of the West Indies, and the yellow pine of the south is much sought after in the tropics for the reason that it best withstands the destructive attacks of the numerous insects that swarm in the air or creep on the soil of the Antilles.

The Winnipeg *Free Press* says:—Ranches now abound all along the base of the Rockies between Calgary and Fort McLeod, and it bids fair to become a prolific trade. Wood is scarce but some fuel is obtained along the streams. In the foot-hills of the Rockies there is plenty of good spruce, tamarac and pine timber. Mr. Cochrane has a portable saw-mill at Calgary, which cut a good deal of lumber last season from logs that were floated down Elbow River. Lumber now commands $50 per thousand at Calgary.

THE Winnipeg *Times* says:—West Selkirk is destined at no early day to become a busy place. It is advantageously situated, and the people are energetic and full of business. The Northwest Navigation Company purpose building a large dock there and to employ six huge barges in bringing lumber from the lake. Mr. Brouse, of Winnipeg, is now getting out the piles for this structure at Bad Throat River. A saw-mill is also to be erected this year at West Selkirk of a capacity of 50,000 feet per day. The machinery is already on the ground.

PROFESSOR BOGDEN HOFF, of Jaroslaw, Galicia, has invented an incombustible wood, which will not burn at the temperature of molten glass. A greater degree of heat leaves the wood a compact coal, which does not burn. At the degree of heat at which this transformation occurs zinc melts in seven seconds, slate breaks in fragments and tiles become glazed. The process of manufacture is simple and cheap, and the wood is as easily worked as before treatment with the required chemicals, which are compounded from the refuse of the industrial establishments.

THERE is a remarkable fir tree in the forest of Alliaz, Canton of Vaud. It is near the baths of Alliaz, at a height of about 1,300 feet above the hotel, and 4,500 feet above the sea, surrounded by a forest of firs, which it overtops by more than thirty feet. The trunk is a little more than thirty feet in circumference at the base. At about a yard from the ground it puts out, on the south side, seven offshoots, which have grown into trunks as strong and vigorous as those of the other trees in the forest. Bent and gnarled at the bottom, these side trunks soon straighten and rise perpendicularly and parallel to the main stem. This feature is not, perhaps, wholly unparalled, but another most curious fact is that the two largest of the side trunks are connected with the principal stem by subquadrangular braces resembling girders. The space between the rough flooring formed by the growing together of the offshoots, at their point of departure, and the girder limbs, is large enough to admit of building a comfortable hermit's hut within it.

IT is estimated that 125,000,000 feet of logs will be put into the Kennebec and tributaries, Maine, this season. Operations have been mainly confined to the Dead river, Moose river and Moosehead lake sections, with a large amount cut on the main river. Ira D. Sturgis and Charles Milliken have taken the contract to drive all the logs along the river from Moosehead lake to Augusta. The work will begin when the river opens, and some 250 men will be employed.

LYNDEN, ONT.

We have received the following letter:—

"SIR,—Inclosed please find $2, our subscription for the CANADA LUMBERMAN from the 1st of January, 1883, to the first of January, 1884. Kindly acknowledge. The lumber business around here is brisk. Great use was made of the splending sleighing, which we have had for about three months for getting in logs. We have in about 1,500,000 feet. Prices are firm.

Yours respectfully,

ROBERT THOMPSON.

Lynden, Ont., March 19, 1883.

QUEBEC FORESTS.

In the Legislative Assembly of Quebec on March 26th, the Hon. Mr. Blanchet, in absence of the Hon. Mr. Lynch, moved the House in Committee to consider the following resolution respecting the sale and management of timber on Crown Lands.

Resolved—1. That it shall be lawful for the Lieut.-Governor-in-Council, immediately after the coming into force of the Act to be based upon this resolution, to set apart as forest land all the ungranted lands of the Crown now held under licenses to cut timber, except such parts of such licensed lands on which no merchantable timber grows, and which are fit for settlement, and also such other portion of ungranted lands of the Crown as the Lieutenant-Governor-in Council, on the recommendation of the Commissioner of Crown Lands, may think fit so to set apart, and that, as soon as the order or orders-in Council setting apart such forest land shall be published in the *Official Gazette*, and from and after the date of such publication, no land included in the territory so set apart shall be sold for settlement purpose until after the expiration of at least ten years, and not then until after it is established to the satisfaction of the Lieutenant-Governor-in-Council that the whole or any portion of such territory is no longer fit for the production and culture of timber, and may with advantage be opened for settlement.

After some remarks in support from Hon. Mr. Blanchet,

Mr. FLYNN said he highly approved of any measure for the protection of our forest wealth, but contended that the resolution went further than the Government probably intended, and that, if carried in its present shape, it would retard the settlement of our Crown lands for at least a dozen years, as, generally, the timber limits throughout the province included the best agricultural lands. As he understood it, the adoption of the resolution would exclude settlers from these lands for a period of ten years, and he thought this a step backward instead of a step forward.

Mr. IRVINE denied that this was the meauing of the resolution.

Mr. JOLY said that what the Government appeared desirous of protecting, in his opinion, was our pineries, and it was a universally acknowledged truth that they did not include auy good agricultural lands.

Mr. FLYNN said the Forestry Congress never asked the Government to set apart all the timber limits as forest reserves. What he believed was their wish, what he believed the Government probably intended, and what he had no objection to see adopted, was the principle that all lands unfit for agricultural purposes, whether included in the limits or not, should be set apart as forest reserves.

Mr. SAWYER thoroughly agreed with the last speaker, arguing that to adopt the resolution in its present shape was to cry "staud" to the settlement of the provinces for the next decade.

Mr. DUHAMEL believed that the adoption of the resolution would give the Government more trouble than they imagined. He referred, for instance, to the fact that license-holders might declare, and with reason, the hard woods merchantable timber, and in that case, the Government would find their hands tied, and would be obliged to shut out settlers from lands on which those woods grow, and which were known to be the very best for agricultural purposes in the country.

Mr. NATEL hoped to see the resolution amended, as it would never do to pass it in its present shape.

Mr. TRUDEL thought the subject matter of the resolution too important to be properly considered at this late stage of the session, and advised the Government to hold it over until the next session.

Hon. Mr. BLANCHET said the Government were willing to strike out the words in the resolution "on which no merchantable timber grows," which, he thought, would obviate all objections.

Mr. FLYNN said there was no necessity for the resolution, as there were already two laws on the statute book which permitted the Government to quite as fully attain the object they had in view, without running the danger of passing a measure prejudicial to colonization.

After some further discussion, the resolution was allowed to stand until Mr. Lynch's return from Knowlton.

SPRUCE DEALS.

The London *Timber Trades Journal* says:—It is somewhat remarkable that so little importance should be attached by dealers to the relative values of different shipments of spruce deals. A very few shillings a standard difference in the price, it would appear, is considered of infinite more importance than almost any difference of kind. The above remarks do not, of course, apply to 4th quality spruce deals, which would, and in point of fact often do, sell at very low figures. It has many times occurred to us to consider whether the importation of 4th quality spruce deals is worth continuing.

The waste in this quality of wood, whenever required to be cut up, is enormous, and must swell the price of the real cost of the material to more than the margin which lies between it and merchantable wood.

It is not fitting that the 4th quality deals should be employed for weight-bearing purposes, and so used whole. They are almost always affected with taint, or else badly cross-shaken. In either it is hazardous to employ them for such purposes. As they can hardly be economical, and as their use is assuredly not desirable, it may well be considered whether their further importation is a necessity.

Spare the Hemlock.

The *Courier and Journal*, of Potsdam, N.Y., calls attention to the fact that the bark-peelers are making havoc with the hemlock of that part of the state, the value of which, for timber and lumber purposes, is becoming more apparent since the spruce is being so heavily drawn upon for supplies. The paper referred to says:—

Few people realize how rapidly the hemlock is disappearing from our forests. It is destroyed, not for timber or for fuel, but almost solely for the sake of the bark. Lumbermen have proposed to attack the hemlock when the spruce shall have been used up, but against the unscrupulous rapacity of the bark-peelers and tanneries, hemlock has no show for existence. All through the Adirondacks these trees are fast falling, and their stripped trunks show that the insatiable appetite of the bark-mill has been felt even there.

Preserved Piles.

The Pacific Pile-preserving and Construction Company has been organized in San Francisco, Cal., with the following directors: William N. Horton, George Gray, Joshua Hendy, J. R. Scupham and B. S. Taylor. The Company is formed for the purpose of manufacturing and selling a preparation for preserving wood to be used in the construction of wharves, bridges, etc. The capital stock is $500,000, and is mainly subscribed. A $5,000 auger will be one of the details of the outfit of machinery. It is intended to start the business on Puget Sound as soon as everything is in working order. The

process employed is patented and declared feasible. It is asserted that the pile men of San Francisco are much perturbed by the scheme, which offers advantages to builders over their own facilities.—*Northwestern Lumberman.*

COSTLY FIREWOOD.

Several years ago a vessel was wrecked on Cape Cod, and among other portions of her cargo that floated ashore were a number of heavy hardwood logs, which, after knocking about in the surf for some time, until all the valuables were secured, were gathered up by the people in the vicinity and used for fuel.

Some person, with a better knowledge of woods than his neighbors, conjecturing that the logs were certainly designed for a more profitable purpose than to cook fishermen's dinners, brought a chip to Boston, and showed it to Mr. R., whose business was, and still is, the preparation of blocks for wood engravers.

"Do you mean to say, sir," said he, "that people are using this wood for fuel?"

"That's just what they're doing of," was the reply.

"Is there much more left?" was the next eager euquiry.

"A few more logs, I should say."

Without another word Mr. R. put on his hat and coat, took the first conveyance for Cape Cod, and reached it in time to secure a valuable prize. They were actually burniug fuel that was worth $800 a cord!

It was indeed the finest and best quality of Turkey boxwood, which to-day would readily bring twelve cents a pound.

SWEDISH FORESTS.

The Stockholm correspondent of the *Timber Trades Journal* says:—We have not lately heard much of the fears expressed a few years ago, that we were cutting down our timber much faster than same was growing, and it becomes a very interesting question, both for your side and ours, whether, for instance, the district of country situate within the range of the Dal Rivers on the south aud Augerman River and its tributaries on the north, can permanently sustain a production which, last season, was about 550,000 Petersburg standards of sawn wood alone. The total forest-bearing grouud within the above district was calculated by a competent official authority at about 15,350,000 English acres in 1880, with an estimated mass of growing wood of all sizes, from fifteen years growth and upwards, of about 47,000,000,000 cubic feet. Those of your readers who are inclined to follow up the calculation for themselves will be able to form an idea as to whether the fears expressed of a timber-scarcity in a generation or so have any foundation in fact or not.

Lumberman's Profits.

The following letter appears in the Ottawa *Free Press*:—

"Sir,—I see by a paragraph in your paper of yesterday—given as if by authority—that I had realized three hundred thousand dollars by my business last year. It would be very gratifying to me to be able to confirm that statement, but truth compels me to say one quarter of the amount would satisfy me for all my trouble and worry of the past year, and would be nearer the truth. Please give this an insertion, and oblige,

J. R. BOOTH.

Ottawa, March 21, 1883.

Forest Fires.

When the order was called in the Quebec Legislature for the third reading of the bill to provide the means for the effectual prevention of forest fires, the Hon Mr. Lynch asked that the bill be referred back to committee to insert a clause, which had been agreed to between himself and the member for Lotbiniere, as well as recommended by the late Forestry Congress, and which he would have moved if he had been present at the last sitting. He explained that this clause was to compel railway companies to clear away, under a heavy penalty, all combustible matter for a certain distance on each side of their tracks in the five districts.

The House accordingly reformed into committee, when a good deal of discussion, mostly of a conversational character, on various features of the measure, ensued, the bill being reported, read a third timo and passed.

BOOMS IN NAVIGABLE WATER.

The following is the bill introduced into the Dominion Senate respecting booms and other works constructed in navigablo waters under the authority of Provincial Acts:—

1. No boom, wharf, dam or aboiteau hereafter constructed under the authority of an Act of a Legislature of a Province of Canada, or under the authority of an Ordinance of the North-West Territories or of the Distriet of Keewatin, shall, so far as the same may interfere with navigation, be a lawful boom, wharf, dam or aboiteau, unless the site thereof has been approved, and unless the boom, wharf, dam or aboiteau has been built and is maintained in accordance with plans approved by the Governor General in Council.

2. Any boom, wharf, dam or aboiteau heretofore or hereafter constructed under the authority of an Act of a Legislature of a Province of Canada, or under the authority of an Ordinance of the North-West Territories or of the District of Keewatin, shall, so far as the same may interfere with navigation, be a lawful boom, wharf, dam or aboitcau, if the site thereof has been approved, and if the boom, wharf, dam or aboiteau has been built and is maintained in accordanee with plans approved by the Governor General in Counoil.

3. The local authority, company or person proposing to construct the boom, wharf, dam or aboiteau shall deposit the plans thereof and a description of the proposed site with the Minister of Marine and Fisheries, and may apply to the Governor General in Council for approval thereof.

4. The Governor General in Counoil may, from time to time, make and alter such regulations as may be deemed expedient, respecting the opening of any swing or draw within the purview of this Act; and the local authority, company or person constructing or owning, or in possession of the boom, as the case may be, shall be subject to such regulations.

5. Any boom, wharf, dam or aboiteau within the purview of this Act which is built upon a site not approved by, or which is not built in accordanee with plans approved by, the Governor General in Council, or which, having been so built, is not maintained in accordanee with such plans may, in so far as the same interferes with navigation, be lawfully removed and destroyed under the authority of an order of the Governor General in Counoil.

6. The preceding section shall not limit the jurisdiction of any court with respect to the removal and destruction of any unlawful boom, wharf, dam or aboiteau.

7. Parliament may, at any time, annul or vary any order or approval of the Governor General in Counoil made under this Act; and any action of Parliament in that behalf shall not be deemed an infringement of the rights of the local authority, company or person concerned.

8. This Act shall not affect any boom, wharf, dam or aboiteau heretofore lawfully constructed, which may hereafter require to be rebuilt or repaired, provided such boom, wharf, dam or aboiteau, when so rebuilt or repaired, shall not interefere more injuriously with navigation than now or heretofore.

9. Each boom, wharf, dam or aboiteau heretofore constructed under the authority of an Act of a Legislature of a Province of Canada, passed since the first day of July, 1867, or under the authority of an Ordinance of the North-West Territories or of the Distriet of Keewatin, shall, so far as the same may interfere with navigation, be a lawful boom, wharf, dam or aboiteau for and during three months from the passing of this Act.

ii. Nothing herein shall be construed to make any sueh boom, wharf, dam, or aboiteau, so far as it interferes with navigation, a lawful boom, wharf, dam or aboiteau after the expiry of the said three months, unless the site and plan have been approved as herein provided.

iii. Any boom, wharf, dam or aboiteau now the subject of litigation on the ground that it is an interference with navigation, is excepted from the operation of this section, and nothing herein shall prejudicially affect the rights of any parties in regard to sueh litigation.

10. The word "boom" includes works necessary and appurtenant thereto; the word "wharf" includes piers, jetties, moles and breakwaters; the word "dam" includes the works necessary and appurtenant thereto; and the word "aboiteau" includes dykes and other works of a similar character.

ENGLAND alone, where trees are planted along every fence-row almost, and over each hill, and carefully protected, so that most of the country appears embowered in foliage; where iron is used in lieu of wood on a vast scale, and where the forests of Northern Europe are within easy sale, yet pays annually no less than $100,000,000, it is said for imported lumber.

TIMBER and other Consignments, and Agencies WANTED. Highest references. Address "Kaisar" care of Messrs. Deacon & Co., 150 Leadenhall Street, London, England. 3L7

Wanted.

A GOOD MAN to take charge of a Steam Circular Saw Mill at Deux Rivieres, as FOREMAN. Must have a thorough knowledge of timber and machinery. Apply to

A. & P. WHITE,
2L7 Pembroke, Ont.

FOR SALE
A Railroad Tie Saw & Carriage
(COMPLETE).

A HORIZONTAL ENGINE, 11x14 in., Fly Wheel 7 ft. Diameter, Band Wheel 4 ft. Diameter, 12 in. Face, Heavy Bed and equal to new. Also,

A HORIZONTAL TUBULAR BOILER, 48 in. Diameter, 9 ft. long, with 96 2-in. Tubes, Fire Front, Back Door and Frame, Grate Bars and 40 ft. of Smoke Stack 22 in. Diameter.

CENTRAL IRON WORKS,
4L7 PETERBOROUGH, ONT.

320 ACRES FREE
IN THE
Devil's Lake, Turtle Mountain And Mouse River Country,
NORTH DAKOTA,

Tributary to the United States Land Office at
GRAND FORKS, DAKOTA.

SECTIONAL MAP and **FULL** particulars mailed **FREE** to any address by

H. F. McNALLY,
General Travelling Agent,
St. Paul, Minneapolis and Manitoba Railway,
28 East Front Street, Toronto.

SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞ Canada Pacific Railway now running through part of the property.

For full particulars address:—

WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

Wanted to Purchase.
LARGE QUANTITIES OF
CLEAN
SPRUCE and PINE
One foot Long and upwards; three inches thick; three to seven inches wide.

S. J. MORELAND,
LUMBER IMPORTER,
And Manufacturer of all kinds of Safety Paraffin and Vesuvian Matches.
GLOUCESTER, ENG.
February 20th, 1883. 3t6

PUBLIC NOTICE

TRADE MARKS.

TESTED

Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

J And Beam Engine Marks.

It having come to the knowledge of Messrs. Thomas Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of J and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.

Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,
EAST PARADE,
SHEFFIELD, ENGLAND,
Solicitors to the said 6L2

THOMAS JOWITT & SONS

VALUABLE
TIMBER LIMITS
FOR SALE,
Situated in the Nipissing District.

The following very desirable limits will be offered for sale at Public Auction (if not previously disposed of) at the

Grand Union Hotel, Ottawa, Ont.
—ON—
TUESDAY, 24th Day of April, 1883,
At 2.30 O'CLOCK IN THE AFTERNOON.

Berth No. 23, Nipissing.....36 square miles
do 43, Georgian Bay.....36 do
do 51, do .....36 do

BERTH 23 is heavily timbered and is very favourably situated for lumbering. The Canadian Pacific Railway crosses the south-west corner of the limit, and parties desirous of unanufacturing lumber for shipment to Manitoba aud the North-West would find this an excellent opportunity for establishing such a business. There is said to be a good mill site on the berth, with good facilities for piling and for shipping either west or east.

BERTHS 43 and 51 are adjacent limits, conveniently located for getting logs into Georgian Bay.

The terms and conditions of sale will be made known at the time of sale.

Further particulars may be had on application to Mr. W. H. Rowley, Manager of the Merchants' Bank of Canada, at Ottawa, Mr. Wm. Cooke, Manager at Toronto, or to

R. C. W. MacCuaig,
Auctioneer, Ottawa.
February, 28th, 1883. 3t6

LEGISLATION FOR BOOM COMPANIES.

Hon. Mr. Mitchell, in the House of Commons asked leave to present a petition permitting the Quaddy Boom Company, of New Brunswick, to seek legislation from Parliament. He explained that for years past the local legislaturos have given charters to boom companies, but a doubt having recently arisen as to the jurisdiction of the legislatures over navigable waters, a test case is now before the Supreme Court, and in the course of the argument the judges dropped such hints as led to the opinion that the judgment of the New Brunswick Court, declaring these charters *ultra vires*, will be sustained. The consequence will be that, unless the Dominion Parliament gives the companies an Act of incorporation, an immense quantity of valuable timber will be exposed to the mercy of any reckless or miliciously disposed person who may cut the booms employed to catch and retain the logs as they float down the streams. Sir Leonard Tilley explained that recognizing the importance of this question, a deputation of New Brunswick members had waited upon the Minister of Justice to ask that the rights of the boom companies should be protected until legislation by Parliament could be obtained. The Government does not intend this session to introduce legislation of a general character in relation to the subject, but they would take the proper steps to protect the rights of the boom companies in the event of the Supreme Court declaring their provincial charaters of incorporation *ultra vires*.

DOMINION PUBLIC LANDS.

The following are the portions referring to timber and timber lands, of the bill introduced by Sir John Macdonald for consolidating and amending the Acts respecting the public lands of the Dominion.

WOOD FOR SETTLERS.

46. And whercas it is expedient that the timber in townships thrown open for settlement, should be so disposed of as to benefit the greatest possible number of settlers, it is therefore enacted as follows:—

1. The Minister of the Interior may direct that in the submission of townships which consist partly of prairie and partly of timber land, the timber lands shall be divided into wood lots of not less than ten, and not more than twenty acres each, in such manner as to afford, as far as practicable, one such wood lot to each quarter-section prairie farm.

2. Provided, that if a quarter-section be found to contain timber-land not exceeding in extent twenty-five acres, such timber land shall be appurtenant to such quarter-section and shall not be divided into wood-lots;

3. Out of any wood lots set apart under sub-clause one of this clause, the Local Agent shall, on application, apportion a wood lot to each settler on a homestead quartor section not having on it more than ten acres of woodland, and such wood lot shall be paid for by the applicant at the price for wood lots fixed at the time by the Minister of the Interior, and shall be entered in the books of the Local Agent, and be given by him, in his returns, as appertaining to such homestead quarter-section, and on the homestead claimant fulfilling all the requirements of this Act in that behalf, but not otherwise, a patent shall issue to him for such wood lot; Provided always, that any person to whom a wood lot was apportioned, in connection with a homestead under the provisions of sub-clause five of clause forty-six of "*The Dominion Lands Act of* 1872," having duly fulfilled the conditions of such homestead grant, shall receivo a patent for such wood lot as a free grant, as provided in the said sub-clause, notwithstanding the repeal of the said sub-clause by the Act thirty-seventh Victoria, chapter nineteen; Provided further, that the cancellation of a homestead entry shall carry with it the cancellation of the entry of the wood lot which may have been apportioned thereto, and also the forfeiture of the purchase money of such wood lot;

4. Provided, that any holder of a homestead entry, who previous to the issue of the patent, shall sell any of the timbor on either his homestead or pre-emption quarter section, or on the appurtenant wood lot, to saw-mill proprietors or to any other than settlers for their own private use, without having previously obtained permission so to do from the Minister of the Interior, shall be guilty of a trespass, and may be prosecuted therefor before a Justice of the Peace, and upon conviction thereof, shall be subject to a fine not exceeding one hundred dollars, or to imprisonment for a term not exceeding six months, or to both fine and imprisonment at the discretion of the Court; and further, such person shall forfeit his homestead and pre-emption rights, and the timber so sold shall be subject to seizure and confiscation in the manner provided by clause *sixty-six* of this Act. 1879, s. 47.

TIMBER BERTHS.

47. In the enactments and provisions in the twenty-four next following clauses the word "timber" means all wood and all products thereof. 1879, s. 50.

48. The Governor in Council may, from time to time, declare districts of territory to be timber districts, and no lease of a timber berth shall be granted except within timber districts so set apart. 1879, s. 48.

49. The Minister of the Interior may set apart any tract of land in any timber district, and may cause the same to be divided into timber berths not exceeding in area fifty square miles each; and the same shall be reserved from sale and settlement; and, under such regulations as may be made by the Governor in Council respecting the ground rents, royalties, or other dues which are to be paid in connection therewith, leases of the right to cut timber on such berths may be granted as hereinafter provided. 1879, s. 49.

50. The Governor in Council may, from time to time, order that leases of the right to cut timber on certain timber berths defined in the order shall be offered at public auction at an upset bonus fixed by the order, and given to the person bidding, in each case, the highest bonus therefor, such bonus to be paid in cash at the time of sale. The Governor in Council may also authorize the lease of the right to cut timber on any timber berth to any person who is the sole applicant to be fixed in the order authorizing the lease to him, and to be paid in cash at the time of its issue;

2. When one or more persons apply for the right to cut timber upon the same timber berth, the Governor in Council may authorize the Minister of the Interior to invite tenders from the applicants; and the one tendering the highest cash bonus therefor, not being less than the upset bonus fixed, as in the next preceding sub-clause provided, shall be entitled to the lease. 1879, s. 51.

51. In cases where applications may be made for limits on which to cut timber in unsurveyed territory, the Governor in Council may, on the recommendation of the Minister of the Interior, authorize the same to be leased for such bonus as may be deemed fair and reasonable,—such leases to be subject, nevertheless, to the conditions of this Act respecting timber berths, except as to that part of clause *fifty-four*, which provides for the erection of mills, which provision, in respect to limits in unsurveyed territory may, if considered expedient by the Minister of the Interior, be dispensed with;

2. Territory in which the block outlines only of townships may have been run and marked, shall be considered surveyed territory, and the Governor in Council may, on the recommendation of the Minister of the Interior, in special cases where the same may be deemed expedient, grant licenses in either surveyed or unsurveyed territory, as the case may be, to cut timber for one year, at such ground rent as the Minister may deem fair and reasonable,—such license to be subject in all respects to the other provisions of this Act, except where the same may be inconsistent herewith. 1879, s. 52.

52. Leases of timber berths shall be for a term not exceeding one year, and the lessee of a timber berth shall not be held to have any claim whatever to a renewal of his lease unless such renewal is provided for in the Order in Council authorizing it, or embodied in the conditions of sale or tender, as the case may be, under which it was obtained;

2. Renewal of a lease shall not be given in any case where the lessee has failed to pay any ground rent, royalty, or other dues in connection therewith. (*New.*)

53. The lease shall describe the lands upon which the timber may be cut, and shall, during its continuance, vest in the lessee all right of property whatsoever in all trees, timber, wood or other products of wood cut within the limits of the leasehold, whether such trees, timber and wood or products be cut by his authority or by any person without his consent; and such lease shall entitle the lessee to seize in replevin, revendication, or otherwise, as his property, such timber where the same is found in the possession of any unauthorized person, and also to bring any action or suit, at law or in equity, against any party unlawfully in possession of any such timber, and to prosecute all persons cutting timber in trespass upon his lease to conviction and punishment, and to recover damages, if any; and all proceedings pending at the expiration of any such lease may be continued and completed as if the lease had not expired. 1879, s. 52.

54. The lease shall contain, in addition to such other provisions as may be in the Order in Council granting it, or in the conditions of sale or tender under which it was obtained, provisions binding the lessee:—

1. To erect in connection with the berth leased, and to have in operation within a time prescribed in the lease, a saw mill or mills of capacity to cut in twenty-four hours a thousand feet, board measure, for every two and a-half square miles of the area leased; or to establish such other manufactory of wood goods as may be accepted by the Minister of the Interior as equivalent thereto;

2. To pay in advance, in addition to the bonus, an annual ground rent of five dollars per square mile, and further, to pay in cash, at each time of his making the return prescribed in sub-clause *four* of this clause, a royalty of five per cent. on his sales of the products of the berth as shewn by such return;

3. To keep correct books of account of his business, and to submit the same for the inspection of any authorized agent of the Minister of the Interior, whenever required;

4. To make monthly, or at such other interval of time as they may be required of him, by regulations under this Act, or by the Minister of the Interior, returns sworn to by him or by his agent or employee cognizant of the facts, declaring the quantities taken from the berth, and those sold, of all timber or products of wood, in whatever form the same may be sold or otherwise disposed of by him during such month or other period, and the amount received by him therefor;

5. To prevent any unnecessary waste of timber in the process of cutting it, and to prevent, when it can be avoided, the destruction of growing trees which have not yet attained a size fitting them to be used for merchantable timber;

6. To exercise strict and constant supervision to prevent the origin and spread of fire. 1879, s. 52.

55. If, in consequence of any incorrectness in survey, or other error or cause whatsoever, a lease is found to comprise lands included in another lease of prior date, or any lands sold, granted, leased or lawfully set apart for any other purpose under this Act, the later lease shall be void in so far as it interferes with any previous lease, sale, grant or setting apart. 1879, s. 53.

56. Every lease of a timber berth shall be subject to the right of the Government to deal, in accordance with the provisions of this Act and regulations made under it by the Governor in Council, with any and all coal and other minerals which may be found within the limits of the berth leased; and the Government shall have the right in dealing, as above provided, with any coal or other minerals in lands leased as timber limits, to authorize the persons to whom such coal or other minerals may be granted, to take possession of and occupy such extent of the land so leased as may be necessary to work such coal or other minerals, and to open necessary roads through any such timber berth, paying the lessee of the berth the value of any and all timber necessarily cut in making such roads or in working the mines; and the provisions of this clause shall operate retrospectively, that is to say, they shall apply to all leases of timber berths heretofore granted under any Act respecting Dominion Lands, as if they had been contained in such Act when it was passed. 1880, s. 7.

57. Every lease shall be subject to forfeiture for infraction of any one of the conditions to which it is subject, or for any fraudulent return; and in such case the Minister of the Interior shall have the right, without any suit or other proceeding at law or in equity, or compensation to the lessee, to cancel the same, and to make a new lease or disposition of the limit described therein, to any other party, at any time during the term of the lease so cancelled: Provided, that the Minister of the Interior, if he sees fit, may refrain from forfeiting such lease for non-payment of dues, and may enforce payment of such dues in the manner by this Act provided. 1879, s. 52.

58. Any ground-rent, royalty, or other dues, on timber cut within the limits of any timber berth, which are not paid at the time when they become due, shall bear interest at the rate of six per cent. per annum until paid, and shall be a lien on any timber cut within such limits; and in case of such non-payment—whether, in consequence, the lease of the berth has or has not been cancelled—the Crown timber agent or other person authorized thereto may, with the sanction of the Minister of the Interior, seize so much of the timber cut on such berth as will, in his opinion be sufficient to secure the payment of such rent or royalty, and all interest and expenses of seizure and sale, and may detain the same as security for the payment thereof; and if payment be not made within three months after such seizure, he may, with the sanction of the Minister of the Interior, sell such timber by public auction, and after deducting the sum due to the Crown, the interest thereon, and expenses aforesaid, he shall pay over the balance, if any, to the lessee, if the timber was in his possession at the time of seizure, or if it was not so, to the person who had possession thereof at that time. 1879, s. 54.

59. All timber cut under lease shall be liable for the payment of the Crown dues thereon, so long as, and wheresoever, the said timber, or any part of it, may be found, whether it be, or be not, converted into deals, boards, or any other manufacture of wood; and all officers or agents employed in the collection of such dues may follow all such timber and may seize and detain the same wherever it be found, until the dues thereon are paid or secured as provided in the next preceding clause. 1879, s. 55.

60. And in case the payment of the Crown dues on any timber has been evaded by any lessee or other party, by the removal of such timber or products out of Canada, or otherwise, the amount of dues so evaded, and any expenses incurred by the Government, in enforcing payment of the said dues under this Act, may be added to the dues remaining to be collected on any other timber cut on any timber berth by the lessee or by his authority, and may be levied and collected or secured on such timber, together with such last-mentioned dues, in the manner provided by clause *fifty-eight*: or the amount due to the Crown, of which payment has been evaded, may be recovered by action at law in the name of the Minister of the Interior or his agent, in any court having jurisdiction in civil cases to the amount. 1879, s. 56.

61. The Minister of the Interior may take, or authorize the taking of, bonds or promissory notes for any money due to the Crown, as aforesaid, or in his discretion, for double the amount of any dues, fines and penalties and costs incurred or to be incurred, and may, if it be under seizure, then release any timber upon which the same would be leviable: but the taking of such bonds or notes shall not effect the right of the Crown to enforce payment of such money, and the debt shall be a lien on any timber cut on the same or any other berth, by the lessee or by his authority, if the sums for which such bonds or notes are given are not paid when due. 1879, s, 57.

LIABILITY OF PERSONS CUTTING TIMBER WITHOUT AUTHORITY.

62. If any person without authority cuts, or employs or induces, any other person to cut, or assist in cutting, any timber of any kind, on Dominion lands, or removes or carries away, or employs, or induces, or assists, any person to

remove or carry away any timber of any kind so cut, he shall not acquire any right to such timber, or any claim for remuneration for cutting the same, preparing the same for market, or conveying the same to or towards market; and when the timber has been removed out of the reach of the Crown timber officers, or it is otherwise found impossible to seize it, he shall in addition to the loss of his labor and disbursements, pay a fine not exceeding three dollars for each tree which, or any part of which he is proved to have cut or carried away, or assisted to cut or carry away; and such sum shall be recoverable, with costs, at the suit and in the name of the Crown, in any court having jurisdiction in civil matters to the amount of the penalty; and in all cases the burden of proof of authority to cut and take the timber shall lie on the party charged; and the averment of the party seizing or prosecuting, that he is duly employed under the authority of this Act, shall be sufficient proof thereof, unless the defendant proves the contrary. 1879, s. 58.

63. Whenever satisfactory information, supported by affidavit made before a Justice of the Peace, or before any other competent officer or person, is received by any Crown Timber Officer or Agent, that any timber has been cut without authority on Dominion lands, or if any Crown Timber Officer or Agent, from other sources of information, or his own knowledge, is aware that any timber has been cut without authority on any such lands, he may seize, or cause to be seized in Her Majesty's name, the timber so reported or known to be cut, wherever it is found, and place the same under proper custody, until a decision can be had in the matter by competent authority.

2. And where the timber reported or known to have been cut without authority, has been made up with other timber into a crib, dram, or raft, or in any other manner has at any mill or elsewhere, been so mixed up with other timber as to render it impossible or very difficult to distinguish the timber so cut without authority, from the other timber, the whole shall be held to have been cut without authority, and shall be liable to seizure and forfeiture accordingly, until the holder shall have separated, to the satisfaction of the Crown Timber Agent, the one timber from the other. 1879, s. 58.

64. Whenever any Crown Timber Agent, or other officer or agent of the Minister of the Interior, is in doubt as to whether any timber has, or has not, been cut without authority, or is, or is not, liable to Crown dues on the whole or any part thereof, he may enquire of the person or persons in possession, or in charge, of such timber, as to when and where the same was cut; and if no satisfactory explanation, on oath or otherwise, as he may require, be given to him, he may seize and detain such timber until proof be made to the satisfaction of the Minister of the Interior, or of such Crown Timber agent or officer, that such timber has not been cut without authority, and is not liable, either in whole or in part, to Crown dues of any kind; and if such proof be not made within thirty days after such seizure, such timber may be dealt with as timber cut without authority, or on which the Crown dues have not been paid, according to the circumstances of the case, and the dues thereon may be recovered as provided in the *fifty-eighth* clause. 1879, s. 62.

65. In case any timber, or any product thereof, is seized under the provisions of this Act by any Crown Timber Agent or Officer, he may allow such timber or product thereof to be moved and disposed of, on receiving sufficient security, by bond or otherwise to his satisfaction, for the full value thereof, or in his discretion, for payment of double the amount of all dues, fines, penalties and costs incurred or imposed thereon. as the case may be, 1879, s. 58.

66. All timber seized under this Act on behalf of the Crown as being forfeited, shall be deemed to be condemned unless the owner thereof, or the person from whom it was seized, within one month from the day of the seizure, gives notice to the seizing officer, or to the Crown Timber Agent or Officer under whose authority the seizure was made, that he intends to contest the seizure. If, within fifteen days days thereafter, the claimant shall not have instituted proceedings before a court of competent jurisdiction to contest the seizure, or if the decision of the Court be against him, or should the claimant fail duly to prosecute such proceedings in the opinion of the Judge before whom such case may be tried (and who may for that cause dismiss the suit on the expiration of three months from the date on which it was instituted,—anything to the contrary hereinbefore enacted notwithstanding), the timber may be confiscated and sold for the benefit of the Crown, by order of the Minister of the Interior, after notice on the spot of at least thirty days: Provided nevertheless, that the Minister of the Interior, should he see cause for doing so, may, instead of confiscating timber cut without authority on Dominion lands, impose a fine, or penalty which, in addition to all costs incurred, shall be levied on such timber; and in default of payment of the whole on demand he may, after a notice of fifteen days, sell such timber by public auction, and may, at his discretion, retain the whole proceeds of such sale, or the amount of penalty and costs only. 1879, s. 61.

67. And whenever any timber is seized for non-payment of Crown dues, or for any cause of forfeiture, or any prosecution is instituted for any penalty or forfeiture under this Act, and any question arises whether the said dues have been paid on such timber, or whether the said timber was cut on other than any of the Dominion lands aforesaid, the burden of proving payment, or of proving on what land the said timber was cut, shall lie on the owner or claimant of such timber. and not on the officer who seizes the same, or the party instituting such prosecution. 1879, s. 63.

68. An officer or person seizing timber in the discharge of his duty under this Act may, in the name of the Crown, call in any assistance necessary for securing and protecting the timber so seized; and if any person under any pretence, either of assault, force, or violence, or by threat of such force or violence, in any way resists or obstructs any officer or person acting in his aid, in the discharge of his duty under this Act, such person shall be guilty of felony, and, being convicted thereof, shall be punishable accordingly. 1879, s. 59.

69. If any person, whether pretending to be the owner not, either secretly or openly, and whether with or without force or violence, takes or carries away, or causes to be taken or carried away without permission of the officer or person who seized the same or of some competent authority, any timber seized and detained for any lawful cause under this Act, before the same has been declared by competent authority to have been seized without due cause, such person shall be deemed to have stolen such timber, the property of the Crown, and to be guilty of felony, and, being convicted thereof, shall be punishable accordingly. 1879, s. 60.

SLIDES, ETC.

70. No sale or grant of any Dominion lands shall give or convey any right or title to any slide, dam, pier or boom, or other work previously constructed on such land, or on any stream passing through or along it, for the purpose of facilitating the descent of timber or saw-logs, unless it be expressly mentioned in the letters patent or other documents establishing such sale or grant, that such slide, dam, pier or boom, or other work, is intended to be thereby sold or granted.

2. The free use of slides, dams, piers, booms or other works on streams, to facilitate the descent of lumber and saw-logs, and the right of access thereto for the purpose of using the same and keeping them in repair, shall not in any way be interrupted or obstructed by, or in virtue of, any sale or grant of Dominion lands made subsequent to the construction of such works. 1879, s. 64.

71. The free use, for the floating of saw-logs or other timber, of all streams and lakes that may be necessary for the descent thereof from Dominion lands, and the right of access to such streams and lakes, and of passing and repassing on or along the land on either side, and wherever necessary for such use thereof, and over all existing or necessary portage roads past any rapids or falls, or connecting such streams or lakes, and over such roads as owing to natural obstacles, may be necessary for taking out timber from Dominion lands, and the right of constructing slides where necessary, shall continue uninterrupted, and shall not be affected, or obstructed by, or in virtue of, any sale or grant of such lands. 1879, s. 65.

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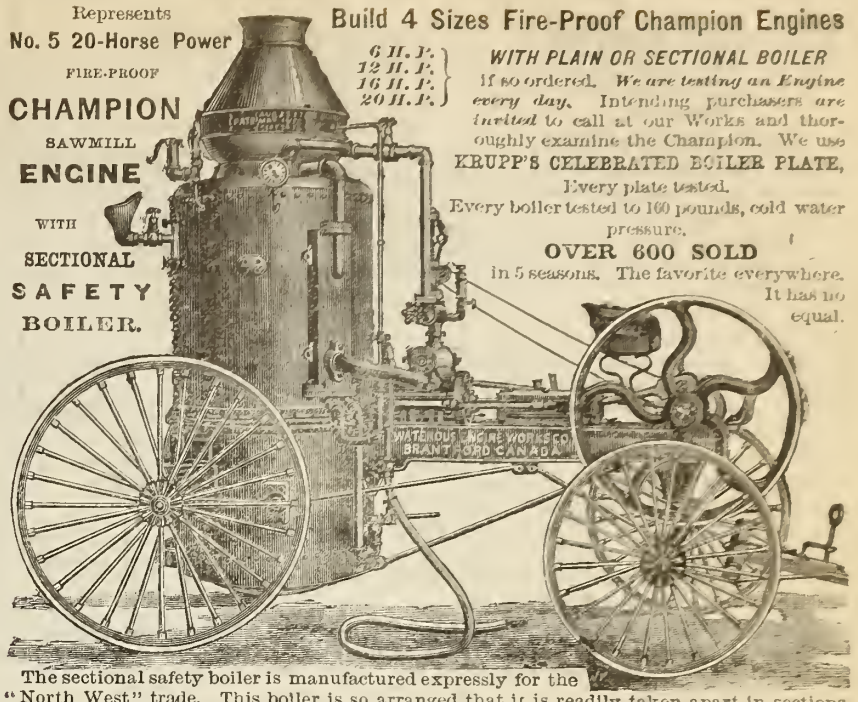

The sectional safety boiler is manufactured expressly for the "North West" trade. This boiler is so arranged that it is readily taken apart in sections enabling purchasers to clean thoroughly every part of it and prevent burning out. *We know from experience this is absolutely necessary with the alkaline waters of the great Western prairies.* Largely used by the Pacific Railway Company and all the large Colonization and Ranche Companies.

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HOUSES IN THE KNOCK-DOWN.

Though the Canadians are now seemingly the the most actively engaged in the business of manufacturing houses in the knock-down, the idea is an old one, and was carried into effect in various countries years ago. More or less is done in that way in Mexico, and something in the United States. Information on the subject comes from various quarters, and Switzerland affords some interesting facts. In that country chalets—the French term for a style of mountain hut—are made in sections, fancifully carved, and so arranged as to be readily conveyed anywhere and put together with great facility, being so lightly constructed as to be capable of dismemberment and ready removal from one place to another. The subject of the art of carving in this connection is reviewod in a letter from a Swiss correspondent to the London *Times*, as follows:

"The first attempt to introduce wood-carving into Berne was made half a century ago by Christian Fischer, of Brienz, who may be called the father of the art, for after acquiring it himself he taught it to others and founded a school. Besides being an artist in wood, Fischer taught music, made musical boxes, and practised the healing art, but, like many other clever fellows, he died in poverty. Some time after Fischer commenced wood-carving at Brienz, a certain Peter Baumann began at Grindelwald the making of the miniature Swiss chalets which are now so popular. He afterwards removed to Meyringen, where he taught his art to his three sons, one of whom, Andreas, proved to be a genius of the first order, and was equally distinguished for originality in design and skill in execution. He was the first to practice carving in relief. His roses are still regarded as masterpieces, and serve as models for young sculptors. The success of the Baumanns encouraged others to follow their example, and wood-carving soon became a winter occupation in nearly every cottage of the valley of the Hasli. But the sale of carvings and chalets being restricted to foreign tourists in the summer season, principally through the intermediary of hotel porters, the trade for a long time was limited and unremunerative. But it struggled on, and in the course of time attracted the attention of local capitalists, who started workshops, opened depots for the sale of their products, and began an export trade, which, with some fluctuations, goes on steadily increasing. The business of wood-carving now finds employment for several thousand individuals. In one establishment alone—that of the brothers Worth—300 to 400 sculptors of both sexes are regularly occupied. Each has his or her speciality, the choice of which is left to the individual taste. Some have an aptitude for and excel in the modeling of groups of animals; others give this attention to flowers and plants; others, again, prefer to carve ornamental caskets and build miniature chalets. The women have great delicacy of touch, and their work in certain branches is preferred to that of men. One thing leads to another, and the abundance of certain sorts of wood in the district suggested the idea of adding to wood-carving the production of what may be called fancy furniture—carved chairs and tables, napkin rings and such like articles. A factory has been started at Interlaken, and is now in successful operation for making habitable chalets on a large scale. You have only to select your design, give your order, and all the parts of a chalet are sent to any destination, so arranged and marked that an intelligent joiner can put them together, and you have a handsome and picturesque house which you may live in as long as you like, and even carry about on your travels."

Outside of what has been done in the direction of establishing manufactories where houses in the knock-down are turned out to order, as in Canada, it is not au uncommon thing for persons removing to new countries to prepare the timbers aud various pieces for a proposed house, put them together to make sure that the main elements of the structure will jibe, and reducing the prospect of tinkering to about the minimum, then shipping the disjointed dwelling to the destined poiut, oftentimes saving a large amount of trouble and cost, to say nothing of time. Contractors who are in the habit of figuring on house bills uuderstaud the case so thoroughly in most instauces that it is an easy matter to furnish a house of this kind so that it may be put together satisfactorily; and as the raw material must always go to the site of a proposed building. it is about as cheap to send it ready-made, along with a few pounds of nails and incideutals, as any other way. This custom will no doubt become more general in the future.—*Northwestern Lumberman.*

Letter from Member of Congress.

HOUSE OF REPRESENTASIVES,
Washington, D.C., Feb. 19, '82.

GENTLEMEN,—Inclosed find $1, and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a bad cold, as has almost every one else here, but canuot find the Elixir, which I used frequently at home and consider a most valuable medicine; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GROUT.

Market Reports.

TORONTO.

From Our Own Correspondent.

MARCH 23.—The continuation of severe wintry weather at a time when we naturally look for some signs of spring keeps building operations suspended to a considerable extent, and factory men, together with master builders, feel inclined to grumble somewhat at the long delay. All the architects' offices are fairly busy and a number of good contracts have already been let, and only await favorable weather to commence work with viger. The retail yards, notwithstanding this partially enforced suspension of building, are doing a good stroke of business and purchase all the lumber now coming forward by rail, which by reason of the snew blockades from time to time is quite limited, and, doubtless, many of the mills will be fully a month later than usual in starting up through the extreme depth of snow and generally severe frost throughout the lumbering districts. It now looks extremely doubtful if our harbor will be open much before the middle of April, as the ice is of unusual thickness and remains as firm as at any time during the winter.

Prices at the yards remain firm and the general feeling is one of hopefulness, and should our trade open up satisfactorily with our American neighbors the prices on bill stuff will stiffen as the season advances.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@45 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

OSWEGO, N. Y.

From Our Own Correspondent.

MARCH 23.—Since last advices trade has improved, and a good many orders are booked for delivery on opening of canal. So far prices are held firm though it is generally conceded that the stocks to arrive will be sold cheaper, as there has been a decline of from one to two dollars in Chicago and at the principal Michigan markets. The season is very backward, and no signs of opening of navigation. Our canals cannot be got in readiness before 1st of May.

There are no changes from last quotations:—

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

CHICAGO.

The *Northwestern Lumberman* of March 24, says:—Trade is considered to be in a healthy state. The revival of demand and prospect of an active season leads holders to view their stocks with more complacency. They are now too busy to grumble much. Prices have possibly touched bottom, and future changes are likely to be for the better. The dealers have had a dose of medicine that has toned up the mercantile system. They don't propose in the near future to be to anxious about laying in stocks. In this respect they are in better condition than they were last spring, when a craze to buy had induced them to load up with stocks over the lake, on dock or in the log, which handicapped them for an entire year. The business they propose to do this year will be of a solid character, and speculation will not be as rife as it was last season. This cannot fail to have a solidifying effect on values, providing no general financial collapse checks the demand later on. Prices may not be much higher, but they will have more tone and integrity. Some even assert that the process of toning up has already begun in prices made to country customers, as well as between dealers, but it is probably wiser to reserve a conclusion on this point until further developments.

Receipts, and stock on hand of lumber, shingles, etc., for the week ending March 22, as reported by the Lumberman's Exchange:

RECEIPTS.

	Lumber.	Shingles
1883	2,518,000	1,200,000
1882	5,525,000	1,048,000

FROM JANUARY 1, 1883, TO MARCH 22, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	25,657,000	20,606,000
1882	64,246,000	14,814,000
Inc.		5,792,000
Dec.	39,589,000	

STOCK ON HAND MARCH. 1.

	1883.	1882.	1881.
Lumber	546,411,311	378,558,184	398,800,030
Shingles	238,643,350	162,302,900	166,010,000
Lath	54,139,448	33,426,283	41,784,270
Pickets	2,746,626	2,354,511	2,251,438
Cedar posts	153,278	112,008	177,304

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$57 00@64 00
Pine, fourths	53 00@57 00
Pine, selects	48 00@52 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of March 24, says:—There is no particular change to chronicle since our last. The weather is rather an unfavorable element, being backward for the season and very variable and threatening. However, the general feeling is that there is to be a very good spring trade, and it is already opening up well despite the unfavorable elements. Prices on general eastern and western soft wood supplies are quite steady, not to say firm, and the demand is good and improving. Hardwoods of desirable grades are also selling well at firm prices.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

BRISTOL.

Messrs. King Brothers' March circular contains the following remarks:—The demand for timber during the past month has been extremely quiet, and what few sales have been made partake generally of a retail character. Quebec goods.—Yellow pine timber—Both waney board pine and common are quite neglected. Red pine—No business. Oak is not inquired for. Elm and birch—None in this market, and the same remarks apply to ash and walnut. Pine deals are moving but slowly at late values. New Brunswick goods.—Spruce deals—The somewhat easier prices elicit but a poor inquiry; stocks are moderate. Pine deals—No stocks. Birch—A cargo has lately arrived, for which there has been a fair demand. United States goods—Pitch pine timber—For hewn there has been very little demand. Sawn has been in moderate request, and a fair quantity has passed into consumption. Deals are quiet. Black walnut—A fresh parcel of prime wood has just arrived, and is now being landed. Whitewood in logs is in small request, but planks are neglected. Oak logs—The market is now cleared. Ash—There has been a fresh arrival, which meets with a fair demand. Wainscot logs are in a trifle better request. Oak planks are not in general demand, but those in special sizes secure attention. Staves are not in such good request. The later arrivals have been of poor quality, and have sold ex ship at corresponding values. The arrivals for the past month consist of one vessel from New Brunswick, 573 tons register, against two vessels, 1,384 tons register, for the corresponding month last year, showing a decrease of 811 tons register.

GLASGOW.

The *Timler Trades Journal* of March 10, says:—There has been only one cargo of pitch pine imported to Clyde this year to date. In the first two months of 1882 four cargoes had arrived, and in the same period of 1881 eleven cargoes. Next statement of stock (to be made up in a few weeks) will, no doubt, show a considerable diminution of pitch pine, compared with the large total in last statement. Prices, however, as yet, do not seem to improve.

An auction sale was held here on the 7th inst., the catalogue comprising Canadian pine and spruce deals, oak planks, and wainscot billets. The business done was limited, a large portion of the catalogue remaining unsold, buyers still appearing unwilling to meet brokers' views as to prices. For the oak planks and billets there was no demand by the company present:—

Ottawa 1st yellow pine deals—			
12 to 19 ft.	6/10×3	2s. 4d.	per c. ft.
Do. yellow pine planks—			
13 to 10 ft.	5/21×2	2s. 3d.	"
10 " 12 "	5/20×2	2s. 1½d. & 2s. 1d.	"
Do. 2nd yellow pine deals—			
14 to 16 ft.	11×3	2s. 1d.	"
9 " 11 ft.	11×3	1s. 9d.	"
Do. 4th yellow pine deals—			
10 to 16 ft.	12/23×3	1s. 1d.	"
Caraquet, N. B., 3rd yellow pine deals—			
12 ft.	8×3	1s.	"

LIVERPOOL.

The *Timber Trades Journal* of March 10th says:—During the past week there has apparently been some relaxation of business, as the railways and other forwarding companies do not appear to be quite so busy as they were last month; still, there is a fair amount of business being done in a quiet way, for no sooner is an order sent into the wharves than it is picked up and forwarded before it is noticed.

During last month many people were saying that there was next to nothing doing, but when the statistics came out at the end of the month, as particularized below, showing that a fair trade had been done, endeavours were made to show that the consumption was a six weeks' and not a four weeks' consumption. That there is a substratum of truth in this no one will deny who is conversant with the trade here, and this can be made clear when it is explained that the annual stock is taken, nominally, on the 28th February, by actual estimation of all stocks in merchants' and brokers' yards, it must take some considerable time to do it in, which is generally about a fortnight; so that some stocks are estimated in the middle and others at the end of the month; therefore we may fairly take the consumption of the month of February as set forth in the table as being that of five weeks; but this same argument applies to the year 1882, and, therefore, for sake of comparison between the month of February in 1882 and 1883, the figures stand good for all practical purposes.

The arrivals continue very small, and consist principally of oak planks, sent forward by steamers trading between this port and Baltimore, and of mahogany.

LONDON.

The *Timber Trades Journal* of March 10, says:—The proportions of American deals (pine) are much the same as when we last made the comparison a month ago, and are still short of those of February twelvemonth by 154,816 pieces. There were some heavy pine sales in the early months of last year, and the trade in this description was altogether brisker, so that we must attribute the slow movement in relation to the dock stocks of this description to the general dulness now prevailing; in last Wednesday's sale there was only a few lots of deals of this description, which fell to one buyer at £9 10s., a price that is not at all in harmony with the limited nature of the stocks. We expect, however, the yards are pretty well supplied, a great deal of the past season's import having gone direct to the purchaser without troubling the dock company to land it. The stock of spruce deals still continues behind that of last year at similar date, and though from some of the lower ports we may look for an arrival or two towards the end of next month, yet with the prospect of a cold spring, it may be much later before any additions to the present supply are received here. As far as regards the state of the stocks on this side generally, both Baltic and Colonial, their present proportions offer certainly no obstacles to an advance in values; indeed, the fact of there being not more than an average quantity will, at the slightest indications of activity in the wood market, help values up rapidly. The duty that has been taken of Canadian wood produce by the United States Government, amounting to something like 4s. a standard, will give a fillip to prices of pine goods, though whether it will be appreciably felt over here is difficult to say. We expect a great deal of timber in the lake districts has found its way to the United States for many a long day, and in this way the difference to the Canadian production by the reduction of the duty, which we apprehend was never a prohibitory tariff, will pass unheeded.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal*, writing on March 10th, says:—The same cry of want of business, which has been heard so long, is still perplexing the sawmill owners and timber exporters of the North of Sweden, and the latter have at length taken a step which should have been adopted three months ago; to wit, *measures having for their object a reduction in the present winter's output of logs.* As your readers will have observed from my last week's telegram, producers between Gefle and Sundswall have agreed to restrict their get of logs by about 25 per cent., and it is also understood that a few of the most extensive and influental firms north thereof will likewise adopt a similar measure. Although the step taken has a suspicious resemblance to that of the worthy who locked his stable after his horses had been stolen, still it will have a beneficial, if somewhat prospective, influence. Producers now see that some such restrictive measure is so obviously in their own interests, that I have no doubt the agreement will be generally kept, and that a fair reduction in the "get" will be the result. Should this be the case, the market will probably soon recover its vigour, seeing that the heavy stock of sawn wood on hand in Sweden is counterbalanced by a decidedly smaller stock of logs in the waterways than usual. It is this circumstance, and the strong financial position of the trade as a whole, that offer such a barrier to further reductions in price.

Subscribe for the CANADA LUMBERMAN.

SAGINAW RIVER.

EAST SAGINAW, Mich., March 20.—There is plenty of snow in the woods and hauling is good, although many operators have got in all they calculated on and are coming out. A heavy storm prevailed on Sunday and several inches of snow fell. The weather has been cold and wintry the past three days. Charles Floyd, who has taken the contract to drive the logs on Rifle river, says the product will approximate 140,000,000, against 115,872,000 for 1882, rafted out, and 6,213,000 feet in the booms at the close. The product of the Chippewa and its tributaries is estimated as follows :—

	Feet.
Main Chippewa	28,900,000
South Branch	27,000,000
North Branch	9,000,000
Coldwater	35,000,000
Total	99,000,000

A. Micho, who is lumbering on sections 10 and 11 of town 26—8, and banking on Pine river, has in over 2,600,000 feet of logs. He will put in a cut of 3,000,000 feet. David Mulvena has put 4,300,000 into Brush Lake, near Alpena. C. Wilson is putting into Pine river 3,000,000 feet. John C. Brown will complete his operations about April 1. He operates 11 camps and his cut will approximate 30,000,000. The estimate for Bluff creek is 6,500,000.—*Northwestern Lumberman.*

Logs in Abundance.

The Chicago *Northwestern Lumberman* says: The result of the present logging season should forever silence the men who every season prophesy that the logs put in will not meet the demand of the mills. The present season has been very unfavorable, and it is doubtful if the loggers have ever worked to greater disadvantage. The weather has been severe, the earth soft and the snow deep. It has been a telling winter on both men and teams. Last winter was a very bad one, but the cost of putting in stock this winter has exceeded that of last But, notwithstanding the various drawbacks, there will be logs in abundance, although the intended cut in some cases will not be secured. As long as the operators, backed by amply capital, make a business during the winter months of banking logs, no weather that has ever been experienced yet will beat them.

Good Sawing.

A gentleman, writing from Tennessee, says it it not the ambition of the firm of which he is a member to see how great an amount of lumber it can turn out, but it will aim to saw all the good lumber possible out af a log, and call culls culls. He thinks he can make more money by doing good sawing, and less of it in a day, than by running as many logs through as possible, and calling the entire output marketable lumber. If all mill men were to adopt this as their platform, few of them would be obliged to submit to a knock-off in prices when their lumber was marketed, because it was poorly manufactured and graded.—*Northwestern Lumberman.*

THE *Northwestern Lumberman* says :—There are indication on a majority of the streams that a break-up is near at hand. On a few of the rivers work is already suspended, and the operators are ready for the spring drive. In several districts there is plenty of snow, and work will be kept up until warm weather calls a halt. Many figures are floating around, pretending to give the cut of the different section, but outside of two streams—one of them a small one—all such figures are guesswork.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle,

CLYDE PRICES.

The *Timber Trades Journal* says :—A sale of American timber and deals was held at Greenock, on 22nd of February, as under noted, when a large company assembled and bought freely. From the prices recorded the brokers have apparently made a slight concession as to price on some portions of the goods exposed.

		Per cub. ft.
Quebec waney boardwood—		
80 c. ft. av. per log		2s. 6d.
48 "		2s. 2½d. & 2s. 2¾d.
40 "		2s. & 2s. 0½d.
38 "		1s. 9¾d.
Do, yellow pine—		
65 c. ft. av. per log		1s. 8½d.
50 "		1s. 6½d.
Do. red pine—		
38 c. ft. av. per log		1s. 5½d.
40 "		1s. 3d.
35 "		1s. 1¾d. to 1s. 2½d
19 "		1s. 2½d.
35 & 30 "		11½d. to 1s.
Do. whitewood (canary colored)—		
88 c. ft. av. per log		1s. 10d.
Do. oak—		
30 c. ft, av. per log		2s. 2½d. & 2s. 3d.
25 "		2s. 2d. & 2s. 1½d.
Do. Elm—		
35 "		1s. 6½d.
Do. birch—		
22½ "		2s. 7½d.
Do. square maple—		
66 c. ft. av. per log		1s. 6½d.
Do. square hickory—		
45 c. ft. av. per log		1s. 8d.
Hewn pitch pine—		
76 c. ft. av. per log		1s. 2½d.
Sawn pitch pine—		
47 c. ft. av, per log		1s. 5½d. & 1s. 6d.
35 "		1s. 3½d.
Pitch pine planks—		
19 to 24 ft.	9/14×3/5	1s. 3d.
Oak planks—		
6 to 20 ft.	12×5	1s. 11d.
Hickory billets (each)		1s.
Quebec second yellow pine deals—		
14 to 16 ft.	11×3	2s. 6d.
11 " 13 "	11×3	1s. 9½d.
9 " 11 "	7/17×3	1s. 5d.
9 ft.	7/11×3	1s. 4d.
Do. deal ends—		
7 & 8 ft	7/11×3	1s. 7½d.
Do. 3rd yellow pine deals—		
13 to 16 ft	8/11×3	1s. 0¾d.
12 "	11×3	1s. 0½d.
10 " 16 "	6/10×3	1s. 0¼d. & 1s. 0½d
12 "	7/10×3	11¾d.
Do 4th yellow pine deals—		
12 ft	9×3	10½d.
12 "	7/9×3	10½d.
Do red pine deals—		
16 ft	9×3	1s. 2d.
Do 3rd spruce deals—		
12 ft	9×3	10¾d.
13 "	9×3	10½d.
11 to 13 "	9×3	10d.
Do 4th spruce deals—		
12 to 14 ft.	9×3	9¾d.
9 " 13 ft	9×3	9½d.

Successful Season.

The last of McDonald Bros.' men returned from their lumbering shanty in the first concession of Dummer, at the head of Clear Lake, on Saturday. They had a most successful season, and took out more logs than they did last year. The only drawback was the loss of of two horses, both of which died in the same week, one dropping dead in the harness and the other dying after being sick a day and a half. The firm has lost in the shanties eleven horses inside of nine years, which is no slight loss.

Winnipeg.

The *Commercial* of March 20, says :—Prices remain at old quotations, viz.: Sheeting, $28; common dimensions, $30 to $31; fencing, $28 to $34; stock, $33 to $40; flooring, $35 to $48; graded clear, $50 to $70; shingles, $4.50 to $6; laths, $5.

THE *International* of Emerson, Manitoba, says :—Our lumber dealers are shipping large quantities of lumber to points west on the C. P. R., principally Manitoba City, Moose Jaw and Regina.

THE *Northwestern Lumberman* says :—During January, 11 lumber vessels sailed from Puget Sound for the ports of Melburne, Valparaiso, Honolula, Callao, Salina Cruz, Townsville, Australia, Shanghai, Sydney and Guayamas. They were loaded at Port Gamble, Utsalady, Port Blakely and Seabeck, with cargoes comprising 5,396,889 feet of rough lumber, 374,575 laths, 513,155 feet of surfaced lumber, 62,900 pickets and 200 piles, the aggregate valuation of which was $82,443.75. The list of vessels arriving from foreign ports, and arriving coastwise to sail foreign, comprises 13, of which nine are American, two British, one French and one Chilian.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. L7

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Feb., and for the first two months of the year :—

MONTH ENDED 31ST FEB., 1883.

	Quantity. Loads.	*Value.* £.
Timber (Hewn).		
Russia	210	1,025
Sweden and Norway	13,732	20,466
Germany	1,535	3,971
United States	2,982	13,524
British India	8,111	111,094
British North America	347	1,993
Other Countries	28,976	30,023
Total	55,895	182,096
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,773	4,290
Sweden and Norway	18,408	47,001
British North America	11,004	25,627
Other Countries	8,235	29,758
Total	39,420	106,676
Staves, (all sizes)	1,944	13,075
Mahogany (tons)	3,904	33,319
Total of Hewn and Sawn	95,313	288,772

TWO MONTHS ENDED 28TH FEB., 1883.

Timber (Hewn).		
Russia	776	1,716
Sweden and Norway	29,604	45,522
Germany	4,753	17,280
United States	5,524	24,353
British India	11,433	156,362
British North America	3,917	18,685
Other Countries	63,826	72,225
Total	119,833	336,143
Timber (Sawn or Split, Planed or Dressed).		
Russia	6,540	16,395
Sweden and Norway	42,449	107,634
British North America	38,062	88,982
Other Countries	13,724	51,831
Total	100,775	264,842
Staves (all sizes)	4,259	28,951
Mahogany (tons)	5,587	50,957
Total of Hewn and Sawn	220,608	600,985

Spruce Export Duties.

The Sherbrooke *Gazette* says :—Among the notices of motion in printed routine of proceeding in the Ottawa Parliament, we observe with pleasure that Mr. Ives, the member for Richmond and Wolfe, has notified the House of his intention to introduce a resolution "declaring it expedient to consider the question of an increase of an export duty on spruce logs exported from the Province of Ontario and Quebec." We have repeatedly spoken of the necessity for restrictive legislation in this matter, as the manner in which our forests are being denuded of their best timber and transported in the log free to the United States, there to give employment to numberless lumber mills and thousands of workmen, is a subject demanding serious attention.

MR. C. WHITNEY and J. White were cutting wood in the woods recently, near Oswego, N.Y., and after felling a tall tree, proceeded to saw it up. While sawing off a log full fifty feet from the butt, the saw struck something, which at the time they called a knot, but the condition of the saw indicated that it had passed through harder than stovewood, and upon examination they found a stone the size of a butter nut firmly imbedded in the tree, and which was sawed completely through the centre. The tree was sound and the stone so firmly fixed that they had to dig it out with a knife.

THE Orillia *Packet* says :—Messrs. Tutton & Trill, of the Orillia foundry, shipped on Wednesdey a 75-horse power engine to Thompson & Baker, Gravenhurst. They have sent them a large lot of heavy machinery during the winter, and have more to ship as Messrs. Thompson & Baker are re-building their mill. Messrs. Tutton & Trill have nearly completed a 70-horse power massive engine, for the large tug Huron on the Georgian Bay, for the American Lumber Company. They shipped last week to the British American Lumber Company, Midland, about 12,000 lbs of castings for mill machinery and large burner. They have now in hand the repair work for seven saw mills, and orders for two more large engines, which they are just commenciug.

Davy & Clark, druggists, Renfrew, date of June 3rd, write :—"Burdock Blood Bitters, though comparatively a new preparation, has taken the lead in this locality as a blood purifier, our sales of it being equal to that of all other medicines used for the purpose during the last year."

A ROPE ABOUT OUR NECKS.—A weak stomach or enfeebled circulation is like a rope about our necks. We are strung up and unstrung alternately till existence becomes unbearable. Burdock Blood Bitters will arrest all this misery. Burdock Blood Bitters is a boon to the sick. Let us remember this fact.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w46d112L22

THE EAGLE TREES.

Great pines that watch the river go
Down to the sea all night, all day,
Firm-rooted near its ebb and flow,
Bowing their heads to winds at play,
Strong-limbed and proud, they silent stand,
And watch the mountains far away,
And watch the miles of farming land,
And hear the church bell tolling slow.

They see the men in distant fields
Follow the furrows of the plough;
They count the loads the harvest yields,
And fight the storms with every bough,
Beating the wild winds back again.
The April sunshine cheers them now;
They eager drink the warm spring rain,
Nor dread the spear the lightning wields.

High in the branches clings the nest
The great birds build from year to year;
And though they fly from east to west,
Some instinct keeps this eyrie dear
To their fierce hearts; and now their eyes
Glare down at me with rage and fear;
They stare at me with wild surprise,
Where high in air they strong-winged rest.

Companionship of birds and trees!
The years have proved their friendship strong;
You share each other's memories,
The river's secret and its song,
And legends of the country side;
The eagles take their journeys long,
The great trees wait in noble pride
For messages from hills and seas.

I hear a story that you tell
In idleness of summer days;
A singer that the world knows well
To you again in boyhood strays;
Within the stillness of your shade
He rests where flickering sunlight play,
And sees the nests the eagles made,
And wonders at the distant bell.

His keen eyes watch the forest growth,
The rabbit's fear, the thrushes' flight;
He loiters gladly, nothing loath
To be alone at fall of night.
The woodland things around them taught
Their secrets in the evening light,
Whispering some wisdom to his thought
Known to the pines and eagles both.

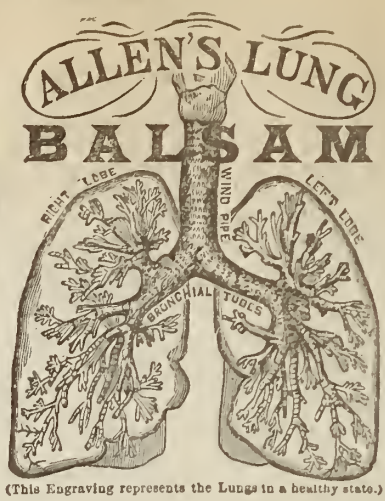
Was it the birds who early told
The dreaming boy that he would win
A poet's crown instead of gold?
That he would fight a nation's sin?—
On eagle wings of song would gain
A place that few might enter in,
And keep his life without a stain
Through many years, yet not grow old?

And he shall be what few men are,
Said all the pine trees, whispering low;
His thought shall find an unseen star;
He shall our treasured legends know;
His words will give the way-worn rest
Like this cool shade our branches throw;
He, lifted like our loftiest crest,
Shall watch his country near and far.

—*Sarah Orne Jewett, in Harper's Magazine.*

DUTY ON SPRUCE LOGS.

Mr. Ives moved in the Canadian House of Commons, on Wednesday, March 14th, a resolution declaring it expedient to consider the question of an increase of export duty on spruce logs exported from the Provinces of Ontario and Quebec, and pointed out that there was nothing new in the principle of the motion, for it was in persuance of the settled policy of the Government. The present duty of $1 per thousand was not sufficient to prevent export of logs to be sawn in the United States. He knew of one case where Canadians had gone across the lines and built mills in the States in order to saw Canadian logs. Slabs and other refuse of these logs were used as pulp wood on which there was no export duty. In some cases he knew logs to have been sawn up into boards, thus escaping export duty on logs. He advocated an export duty on pulp wood to meet this difficulty and as protection to Canadian pulp manufacturers. Mr. Benson advocated extending the law to all saw-logs, otherwise lumber manufacturers would be driven from the Province. Sir Leonard Tilley promised to consider the matter, but pointed out that to change the law without warning would cause loss to those who had entered into contracts. Mr. Charlton strongly objected to the tax. The Americans imposed a duty of $2 upon lumber, whereas we imposed a higher duty, and they charged no export duty. This class of legislation was calculated to provoke retaliation, so that there might be an export tax imposed on logs from the State of Maine into New Brunswick. The effect of increasing the duty would be to reduce the price to the farmer for the benefit of the saw-mill man, which he thought a poor application of the motto "Canada for Canadians." He went on to speak of the general export duty on logs, holding that its principal result was to enable Michigan saw-mill men to import logs from Georgian Bay instead of their being floated down to Toledo or Cleveland. If there was so much done in the way of sending logs across the lines from Canada as was asserted, it must have been done by evasion of the export duty. Last year the export duty on this article was $8,000, which would give about 8,000,000 feet, or enough to supply a mill for about three months. He asked what would be thought of a proposition to put a duty of 20 per cent. on wheat, because flour was manufactured in the United States. An increase of duty would in his belief only lead to an increase of friction between Canada and the United States, and make it more probable that retaliation against Canada would result. Mr. Mitchell followed, expressing pleasure that this proposed increase was only to affect Ontario and Quebec, as among his constituents was a considerable export of spruce spars, which he would be sorry to interfere with. He condemned the increase in any case as tending to harm limit holders in Ontario, while conferring only a doubtful benefit on a few people in the Eastern Townships. He called on the Finance Minister to come to the rescue of the lumberman by reducing the duties of cornmeal and other mill supplies. The men had supported the National Policy, and so did he (Mitchell), and would still, but that very thing he thought should be a recommendation to the consideration of the Government. Mr. Cook spoke against the duty, endorsing what Mr. Charlton had said regarding the export of logs to Michigan. Mr. Ives, in reply to Mr. Charleton, had used the expression "speculators" as applied to the holders of limits in Western Ontario. Mr. Cook said he thought they were, on the contrary, *bona fide* representatives of a *bona fide* interest. He admitted that limit holders in the North West might be called speculators, for he understood that the limits had been secured by doctors, lawyers, and ministers, who could not be expected to work them. He asked what Mr. Benson would think if an export duty were imposed on corn by us so as to prevent his manufacturing it, and he asked what would be the result to Manitoba saw-mill men of the United States put an export duty on logs floated down the the Red River from Manitoba. Would the Minister of Custom, Mr. Bowell, representing North Hastings, allow an export duty to be put on iron ore going to the United States? In case an attempt might be made to weaken the force of what he said by showing that he was engaged in the trade of exporting, he stated that he dealt in manufactured lumber only, but he knew of farmers having timber on their farms useful only to be cut into long logs and shipped to the United States, and the effect of the duty was to decrease the price they received for such timber. Mr. Valin was in favor of increasing the export duty on logs, because, owing to the price of lumber in New York and other American cities, large quantities of Canadian lumber were sent to American markets. This caused the destruction of Canadian forests, and timber was now scarce where formerly it was plenty. He also advocated an export duty on hemlock bark, as such large quantities of it were sent to the United States that the supply was now giving out in many districts. Mr. Sproule said that the duty would not bear hard on the farmers, but on speculators who monopolized the timber trade of Georgian Bay and and other regions. Mr. Bourbeau spoke in favor of the export duty in French. Mr. Scriver said that the mover was mistaken when he asserted that the tax would affect a few owners of large timber limits alone, and would not be felt by farmers in the district which both he and Mr. Ives represented. Owing to the scarcity of the water power and the fewness of saw mills farmers were obliged to take the timber across the border to be sawed and had to pay the present duty on them, and if an export duty were licensed they would be the principal sufferers. The tax was intended to take money out of the pockets of a few large mill-owners. He (Mr. Scriver) was convinced that the motion was made in the interest of the mill-owners of the Eastern Provinces. At the instance of Mr. Tilley, Mr. Ives withdrew his motion.—*Globe.*



(This Engraving represents the Lungs in a healthy state.)

THE WAY IT WILL AFFECT YOU.

It excites expectoration and causes the lungs to throw off the phlegm or mucous; *changes the secretions and purifies the blood;* heals the irritated parts; gives strength to the digestive organs; brings the liver to its proper action, and imparts strength to the whole system. SUCH IS THE IMMEDIATE AND SATISFACTORY EFFECT that *it is warranted to break up the most distressing cough in a few hours time,* if not of too long standing. *It is warranted* TO GIVE ENTIRE SATISFACTION, EVEN IN THE *most confirmed cases of Consumption! It is warranted not* to produce costiveness (which is the case with most remedies), or affect the head, as it contains no opium in any form. *It is warranted to be perfectly harmless* to the most delicate child, although it is an active and powerful remedy for restoring the system. *There is no real necessity for so many deaths by Consumption,* when ALLEN'S LUNG BALSAM will prevent it if only taken in time. Physicians having consumptive patients, and who, having failed to cure them with their own medicine, we would recommend to give ALLEN'S LUNG BALSAM a trial. *Sold by all Druggists.*

PERRY DAVIS'
VEGETABLE
PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

THE SWEDISH SUPPLY REDUCED.

The London *Timber Trades Journal* says:—It is is stated that the Gefle, Ljusne, Marma, and Iggesund companies, together with several of the large Sundswall saw mills, by last advices have agreee to reduce the present season's log driving and proposed cutting 25 to 30 per cent., rather than to sell their goods for no profit, which they consider would be a waste of time, and, to use their own words, "neither make their financial position better no worse." Some of the mills at Gefle have already, we understand, decreased their cutting in the forests to the extent mentioned, this having been determined upon prior to the general understanding recently arrived at. Furthermore, it is said, the weather in a great measure, has already assisted in decreasing the log driving of those mill proprietors who have not yet pledged themselves to any agreement in respect to this limitation.

REVERSING POSTS.

It is firmly believed by many people that posts set in the ground in a position the reverse of which they stood while growing in the tree, will last much longer than when set top end up. In the spring of 1879 I selected seasoned sticks, three feet long. These were split in two, and and then cut in two crosswise, making four pieces each. One set was placed in well drained sand, the other in clay soil. In every case two pieces were set side by side, with earth between, one as it stood in the tree, the other reversed. I tried thirteen kinds of timber. Some of these were young wood with the bark on. All contained some heart wood. Those set in sand were examined in the autumn of 1881. In case of the beech, sugar maple, ironwood, black ash, and black cherry, the piece reversed or placed top end down was somewhat most decayed. In case of red maple, American elm, butternut and red elm, the piece set bottom end down was a trifle the most decayed. In case of basswood white ash, white oak, and blue ash there was no preceptible difference. In the autumn of 1882, the posts set in clay soil were examined. In case of red maple, sugar maple, American elm, basswood, butternut, red elm, the piece set top end down was most decayed. In case of beech, white ash, black cherry, the piece set bottom end down was most decayed. In case of ironwood, white oak and blue ash, there was no perceptible difference.

I infer that where one piece decayed more than the other it was caused by some trifling difference in the sticks. The freshly sawed ends in each case were placed uppermost, and came an inch or two above the ground.

In some cases one half of a stick (one piece certainly the reverse of the other) lasted considerably better than its other half. As will be seen, it was sometimes the top end down which lasted better, sometimes the bottom end down, and in some cases there was no difference in durability.—*W. J. Beal.*

White v. Red Spars.

The following letter appears in the *Timber Trades Journal*:—

SIR,—There has been some controversy raised recently as to the comparative merits of white and redwood spars, some people maintaining that whitewood spars, for ship use, are the best, while others assert that the question is ridiculous, and that no one would use white spars who could get red ones. But these latter parties are met by the fact, as I am informed, that the Admiralty use only white spars, which appears to be a very strong argument in their favor; on the other hand, it is understood that redwood spars are decidedly preferred in the merchant service. Perhaps you, Sir, or some of your experienced readers, will let a little daylight into this subject for the instruction of your very obedient servant,

A SELLER.

Chatham, 28th February, 1883.

The Stylograph Pen.

The stylographic pen is one of the necessaries of our modern civilization. If Hood's song had been "Dip, dip, dip," instead of "Stitch, stich," it would have lost its text at the hands of Mr. Livermore, who has given his age this perfection of pen, penholder and case, and ink, all in one, handsome, and always at hand and ready for use. The inventor has put some new improvements into it, and now what remains but for every scribe and letter writer to find it on his desk. Ink, filler, and cleaner, all go with it. And to crown all the price has been reduced to $2. Send that amount to the sole agent, Mr. Louis E. Dunlop, 200 Washington St., Boston, Mass., and the return mail will bring you this most perfect pen.—*Contributor, Boston, Mass.*

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit, President. JAMES T. BARNARD, Hamilton, Secretary-Treasurer. SAMUEL BRIGGS, Hamilton, Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH,
GALT.

Messrs. R. H. SMITH & CO.,
ST. CATHERINES.

JAMES ROBERTSON, ESQ.,
MONTREAL.

Messrs. JAMES ROBERTSON & CO.,
TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ.,
PETERBOROUGH,
Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON,
DESERONTO,
Lumber Merchants.

THE WINNIPEG LUMBER TENDERS.

The method adopted by the city in making contracts is rather peculiar. Some time ago they advertised for tenders for 1,500,000 feet of lumber for city purposes. The tenders were opened in due time and the council at the first meeting thereafter awarded the contract to the lowest at $24.66. The winning tenderers are new comers to the city. Local pressure was brought to bear upon the council and the august body met again, rescinded their former resolution and awarded the contract to the next highest. Such a mode of dealing with tenders is certainly not according to the ordinary rules of doing business. The whole object professedly arrived at in inviting tenders was to obtain the lumber at the lowest figures. The tenderers presented their offers in perfect good faith believing that whoever was the lowest he would be sure to get it no matter who it might be. The lowest tender was accepted in the first place, then after all the figures are made public one firm thinks fit to amend his tender so as to bring it below the one which had been successful. The council allows this to be done, and the party who should have got it, and did get it in the first place, is left out in the cold. Further comment is unnecessary.—*Winnipeg Commercial.*

A CANADIAN ELECTRICAL FACTORY.

Electricity is no longer a subject of unmixed wonder and amazement. Science has revealed it as a servant to man, capable of doing him service in a thousand ways. Probably its application to the wants and comforts of humanity is but in the very infancy of discovery. There is a vastness in electricity as boundless as space itself, and there can be no limit to its usefulness. As a purifier of the atmosphere it is without rival in nature; as a medium by which intelligence may fly through space it has no equal, and it bids fair to substitute candles, lamps, and gas by its more pervading light-giving power Even heat and motive power may yet find its highest perfection in electricity. But none of the modern applications of this marvelous force are more valuable to humanity than those which are directed against personal suffering, and "the ills which flesh are heir to." As a curative or remedial agent, electricity bids fair to rank amongst the very highest and best of the vast resources and unlimited varieties of nature. To apply electricity in a practical way, so as to bring it into actual contact with the many weaknesses and complaints of physical life is a great study, and one which we venture to say has but just begun to develop. It will be interesting indeed to Canadians to know that one of the most direct applications of the electric fluid to the human body has given birth and growth to an industry. We recently visited the establishment of Mr. A. Norman, of No. 4. Queen street east, Toronto, and were surprised to find it quite a factory for the production of great varieties of appliances for conveying electricity to the various parts of the human body.

Mr. Norman is a practical thinker, and endeavors to work out the problem of the application of nature's forces by numerous agencies simple in themselves, but capable of accomplishing the desired end in proportion to the degree of mechanical perfection in which they are made.

The manufacture of electric appliances was commenced in Toronto by Mr. Norman seven years ago. He then started to make insoles for the feet, and charging them with electricity so as to apply to the extremities. Very speedily his business developed into the manufacture of belts for the back and chest, waist, head, and indeed all parts of the body, so as to bring the application of the vital fluid to the parts affected.

In the manufacture of these various appliances, Mr. Norman has provided himself with the newest and and best machines, so as to turn out the work efficiently and to make them comfortable as well as effective to the wearer. Here are the cutting benches with numerous presses and suitable shears—a large dieing press with a variety of dies of various shapes to stamp out the metal as required, machines also for cutting metal to the sizes, sewing machines for stitching the materials together, &c. Here are coils of many pounds weight of copper, of zinc and other metals and numerous smaller matters which did not escape our notice, but would weary our readers to detail them. The electric battery which Mr. Norman uses is believed to be the largest in use for this kind of purpose in Toronto.

"What metals do you find to be the best conductors of electricity"? we asked.

"I use zinc and copper—zinc and silver—zinc and gold—zinc and platinum—the latter combination is decidedly the best, and is also the dearest," was the reply.

"And do you make many of these various kinds of belts?" "We are never idle," was the reply, "our business is constantly on the increase and orders come from far and near. There—pointing to a goodly pile—is a shipment for the States."

"So you export them, do you?" was our next enquiry. "Oh yes, we ship great numbers to the States, as they cannot get our kind of belt except through us."

"What is the best article you make as a belt for general use."

"THE ACME," said Mr. Norman, "is my own invention. I have travelled much through the States and elsewhere, and have been an observer always, and I conscientiously believe the "Acme" to possess all the advantages of every bolt yet made, without any of the drawbacks of others."

The one thing which surprised us most, perhaps, was the great variety of these belts, and the large stock—carefully arranged in sizes—which Mr. Norman finds it necessary to carry in order to keep pace with the demands of his business. As to the practical value of all these appliances, we can only say that Mr. Norman possesses abundant testimonies to their worth, and furnishes more than sufficient proof of the genuineness of these testimonials. How they affect this end can best be learned from Mr. Norman, who will gladly send circulars, pamphlets and all particulars on application to his address at 4 Queen street East, Toronto.

BOOK-BINDING.

Our facilities for BOOK-BINDING enables us to execute every description of work as well as it can be done in the cities, and at current CITY PRICES.

Blank Books and Account Books of any size Ruled to any pattern desired, and bound in the most appropriate and durable manner.

Books taken out in parts, Bibles, Works of Art, Illustrated Works, Music Books, Magazines, Perodicals and Newspapers bound in any style desired.

Old Books, Albums, &c. Repaired and Rebound.

Maps, Pictures, &c. Mounted and Varnished.

Names Lettered in Gold Leaf on Presentation Books, Bibles, Purses, &c.

THREE FIRST PRIZES FOR BOOK-BINDING AT THE CENTRAL EXHIBITION.

{ TOKER & Co.

Printers, Bookbinders, &c., PETERBOROUGH, Ont.

THE NORTH-WEST TRADE.

The Winnipeg *Commercial* says:—The vast quantities of logs and timber that are being taken out during the present season in the Lake of the Woods and Lake Winnipeg districts, and which will be manufactured into lumber in the spring, points to a supply of the home product far in excess of what has yet been known. Enterprising capitalists, many of them at the same time practical men, have gone into the business of supplying lumber from our own forests in earnest. There seems to be little danger this year of the dearth of building material in this line which occurred last season. There may perhaps be somewhat of a scarcity for a while early in the season, but so soon as the mills get fairly running the supply will be equal to all demands. Besides the local product there will also in all probability be a considerable supply from outside.

This must according to the usual course of events, result in a more reasonable rate being charged for lumber. The city has already made a contract for a million and a half feet at a price considerably below that of last year. Private parties cannot but reap a corresponding benefit. Even at a figure below that of last year the manufacturers will have a good margin of profit left. Of course the demand from the rising towns outside and from the farmers in the country will be largely in excess of any previous year, but the supply in sight is correspondingly increased.

The whole country will reap a benefit by the large supply. Last year the great drawback to building operations in many cases was the inadequate supply, but it does not seem as if this would occur again. In the United States there has also been a slight fall in prices. At a recent meeting of the Lumberman's Exchange in St. Paul, reductions were made in all descriptions of timber and lumber, so that if it does happen that we have to fall back upon the yards across the line for some of our supplies that could be provided at a figure under that of last year. So that on the whole the prospect of cheaper lumber this year is good all around.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

FITS EPILEPSY

OR

FALLING SICKNESS

Permanently Cured—No Humbug—by one Month's usage of Dr. Goulard's Celebrated Infallible Fit Powder. To convince sufferers that these powders will do all we claim for them we will send them by mail, **post paid, a free Trial Box.** As Dr. Goulard is the only physician that has ever made this disease a special study, and as to our knowledge thousands have been **permanently** cured by the use of these **Powders. We will guarantee a permanent** cure in every case **or refund you all money expended.** All sufferers should give these powders an early trial, and be convinced of their curative powers.

Price for large box $3.00, or 4 boxes for $10.00, sent by mail to any part of the United States or Canada on receipt of price, or by express, C. O. D. Address

ASH & ROBBINS,
20L24 360 Fulton Street, Brooklyn, N. Y.

BAXTER'S MANDRAKE BITTERS

THE ONLY VEGETABLE CURE FOR

DYSPEPSIA,

Loss of Appetite, Indigestion, Sour Stomach, Habitual Costiveness, Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Feb. 28th, 1882 and 1883, and also the Consumption for the month of Feb., 1882 and 1883:—

	Stock, Feb. 30th. 1883.	*Stock, Feb. 30th. 1882.*	*Consumption for the month of Feb. 1883.*	*Consumption for the month of Feb. 1882.*
Quebec Square Pine	191,000 ft.	179,000 ft.	135,000 ft.	184,000 ft.
" Waney Board	177,000 "	239,000 "		
St. John Pine	8,000 "	14,000 "	— "	6,000 "
Other Ports Pine	46,000 "	33,000 "	1,000 "	2,000 "
Red Pine	56,000 "	27,000 "	2,000 "	3,000 "
Pitch Pine, hewn	541,000 "	620,000 "	83,000 "	231,000 "
" Sawn	440,000 "	346,000 "	121,000 "	162,000 "
Planks	62,000 "	69,000 "	23,000 "	33,000 "
Dantzig, &c., Fir	34,000 "	28,000 "	16,000 "	18,000 "
Sweden and Norway Fir	21,000 "	10,000 "	— "	3,000
Oak, Canadian	230,000 "	294,000 "	74,000 "	43,000 "
" Planks	131,000 "	62,000 "	28,000 "	46,000 "
" Baltic	25,000 "	60,000 "	9,000 "	1,000 "
Elm	35,000 "	50,000 "	8,000 "	— "
Ash	4,000 "	15,000 "	5,000 "	2,000 "
Birch	54,000 "	101,000 "	14,000 "	35,000 "
East India Teak	66,000 "	12,000 "	— "	1,000 "
Greenheart	136,000 "	25,000 "	5,000 "	9,000 "
N. B. & N. S. Spruce Deals	15,103 stds.	13,633 stds.	5,839 stds.	4,998 stds
" Pine	1,340 "	726 "		
Quebec Pine & Spruce Deals	7,279 "	6,577 "	756 "	676 "
Baltic Deals	3,984 "	2,675 "	724 "	350 "
" Boards	361 "	90 "	— "	55 "
" Boards Flooring	2,867 "	1,876 "	528 "	724 "

LUMBERMEN'S STATIONERY.

We will supply anything in the line of BLANKS or STATIONERY for Lumber Shanties and Offices at City Prices.

Shanty Settlements
Shanty Orders
Shanty Receipts
Shanty Time Books
Shanty Log Books
Shanty Reports
Shanty Ledgers
Shanty Cash Books
Shanty Way Bills
Drive Books

Office Letterheads
Office Noteheads
Office Envelopes
Office Cards
Office Notes
Office Drafts
Office Orders
Office Receipts
Office Blank Books
Office Ship Account Books

And everything necessary to a complete office outfit.

All PRINTING done in the Highest Style of the Art, and at Lowest Living Prices.

BOOK-BINDING of every Description got up in a very Neat and Superior manner.

Account Books Ruled and Bound to any desired Pattern.

For Schedule of Prices address, describing the kind and quality of work desired,

TOKER & Co.,

"THE CANADA LUMBERMAN,"

PETERBOROUGH, ONTARIO.

EMERY WHEELS FOR SAW GUMMING.

In order to remove the difficulties connected with the importation of TANITE GOODS in small quantities, and to bring such goods within easier reach of

CONSUMERS IN CANADA,

we have arranged with the well-known firm of

FROTHINGHAM & WORKMAN

MONTREAL,

To take our sole Agency for the Provinces of ONTARIO and QUEBEC. By this means consumers who want only single wheels, or goods in small quantity, can supply themselves easily and avoid the trouble of special importations, while dealers can secure the most liberal terms, fully equal to those they could obtain by buying of us direct.

Messrs. Frothingham & Workman will carry a full stock of TANITE EMERY WHEELS, and a sample line of Machines, and can fill all orders promptly.

The Tanite Company, Stroudsburg, Monroe Co. Pa.

1yL13

September 28th, 1882.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills L7tf

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

25 in ball and 5 in heel are the numbers usually required.

☞PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

T. McAVITY & SONS,

Dealers in Lumber and Mill Supplies,

ST. JOHN'S, N.B.

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McCraken, Gall & Co.,

WHOLESALE AND RETAIL

LUMBER MERCHANTS

And MANUFACTURERS,

☞Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c, American and French VENEERS.

Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.

Yard: Cor. Wellington & Strachan Aves.

FACTORY: Corner Soho and Phœbe Streets.

OFFICE: 39 Adelaide Street East, (First Floor, nearly opposite the Post Office.

L5 TORONTO, ONT. 1y

J. T. LAMBERT,

Lumber and Commission Agent.

ORDERS FOR DIMENSIONS AND ALL OTHER KINDS AND GRADES OF

American Lumber

PROMPTLY ATTENDED TO.

Timber Limits and the Square Timber Trade a Specialty.

Office, Wellington Street, OTTAWA. 1Ltf

BARRIE SAW WORKS

JAMES HAGUE.

Circular, Cross-Cut & Machine Saws

Gummed and Hammered on Short Notice.

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Shop in Sewrey's Foundry, BARRIE, Ont.

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. 1L1

LUMBER

Shingles, Doors, Sash, Flooring, &c.,

WANTED,

STATE QUANTITIES AND PRICE TO

SHORE & DAVIS,

Head Office, 514 Maine Street, **Winnipeg, Man.**

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S. S. MUTTON & Co.,

Wholesale Lumber Dealers

TORONTO.

We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.

☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1Ltf

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 3. PETERBOROUGH, ONT., APRIL 16, 1883. NO. 8.

THE RING-RECORD OF TREES.

Dr. A. L. Child's statement that "trees known to be only twelve years old were found when cut to have thirty-five or forty of the rings which are popularly believed to be annual marks," naturally suggests the idea that rings thus found are no indication of the age of a tree; are mere haphazzard, signifying nothing of importance. It has long been a custom in this country among land surveyors, when running lines through forests, to mark their lines by blazzing all trees which come in the line of sight; as well as those very close to the line. And in place of planting monuments at corners, as the custom is now getting to be, trees were marked as witnesses to corners, as they are known to all surveyors. In surveys made under the direction of the Government, these trees were particularly designated—kind of wood, diameter, course and distance from the corner. Hundreds of times in the past twenty years I have had occasion to chop in these trees to satisfy myself in regard to their identity. In every instance the nrmber of rings corresponds to the number of years since the survey was made. I believe that our forest trees made but one ring each year. The surveyor has an excellent opportunity thus to study the growth of forest trees. It is in this way that we are enabled to trace back the history of a survey; and we can tell to a certainty when new witness trees were made to perpetuate old corners and by whom made.

The truthfulness of this "ring-record" is of great importance to the surveyor. I have no donbt that Dr. Child found these rings, or what to him appears like annual rings; but were they not shaded rings rather than distinct marks, as we may find in some of our fruit trees, especially those brought from a different climate? This shading of rings, I believe, may, in many instances, be due to a premature ripening of the wood, caused by drought or other influences, and afterward from copious rains and high temperature are forced to make a second growth, and in some instance to blossom and set fruit late in autumn. An examination made upon trees of my own planting, both dcciduous and evergreen, proves the annual rings to be true to date every time.

FACTS ABOUT BUTTER TUBS.

Vermont is the great butter tub state of the union, and Montgomery is the town yearly producing the largest number of tubs in this country, or any other for that matter. The fact ories in this town have capacity for producing half a million tubs or packages as the trade call them. They are not all used for butter. A great number are bought by lard packers and the olemargarine manufacturers have within two or three years increased the demand greatly.

Up to 1847 the tubs were made slowly and laboriously by hand. In that year Luther Hendrix, an experienced pail maker of Massachusetts, commenced the manufacture of machine made or turned tubs in Montgomery in a factory built for the purpose. It was then considered a good day's work for one man to turn from 40 to 50 50-pound tubs per day, while now the improvements in machinery and skill acquired by the workmen make it an easy day's work for four men to turn 300 50-pound packages per day. The other work, the hooping, the heading and making the covers, is performed with one-half the labor that was required at that time. It is probably within the bounds of truth to say that 10 men in any of the factories in this town would now manufacture more packages in a given time than 50 men would manufacture in the same time by hand.

The business grew slowly until 1852, when a new impetus seemed to be given the dairy interests. The completion of railroads to the west opened a new and larger outlet, and the small weekly shipments from Montgomery and other Vermont towns in this industry has increased to daily shipments of carloads.

The consumption of lumber by these factories is very large and mostly of spruce, which gives better satisfaction than any other kind of wood. The supply is large. but by no means inexhaustible, and very soon if spruce alone is used it will have to be obtained further back on the hills than now even. It is suggested by a manufacturer of long experience that hemlock, if of the right sort, grown in dry locations may be used without objection. It is quite possible that wood pulp will be successfully used for making butter tubs, and this supply, together with that of hermetically sealed tin packages, now used for ocean shipment to some extent, will be likely to lesson the demand on the forests. —*Boston Bulletin.*

WOOD PULP.

Wood pulp, which is made into paper and molded into barrels, casks, pails, and other wooden ware, boxes, cornices, picture frames, and a variety of small articles, can now be made from many other woods than poplar, which has long held the preference in such manufacture, Buckeye has a white fibre, and can be used, while spruce, pine, chestnut, basswood, fir, hemlock, cedar, cottonwood and other kinds of wood have been found suitable for making into various kinds of paper. Only the non-resinous woods are adaptable for white paper, while the resinous woods serve well for colored paper. Machines have been built which turn out pulp with equal facility from all kinds of wood, however. The longest fibre is made from willow, basswood and poplar ranking next, respectively, in that regard. Cedar, fir and hemlock are said to grind about alike, the latter working a little more freely. Maple has a fibre shorter than either spruce or pine, and is quite hard to grind; birch is comparatively hard, and grinds very short; poplar and buckeye pulp remain white for a considerable time, other woods changing color; birch becomes pink, maple turns purple and basswood takes on a reddish hue. It is estimated that over 200 tons of wood pulp are daily turned out in the United States.—*Lumber World.*

BRITISH COLUMBIA.

Logging methods are rather devoid of improvement in the British Columbia lumber districts. Logs are generally snaked, from two or three to seven or eight yoke of oxen being employed as a team. A good ox-teamster commands the highest wages paid, and is the biggest man on the job. A few mules are used, and one camp has a brace of old-style Scotch traction engines at work on the main road. A New Brunswick man bought them at a cheap price after they had been found to be unsuited for use on a waggon road, on account of the numerous hills. They are credited with doing surprising service on a level and well kept road, and have the advantage of requiring no sustenance while kept idle. What one of them will ordinarily haul can be understood by the fact that it dragged a log 24 feet long and 48 inches in diameter at the small end, with another dogged to it at the top that was 60 feet long and 24 inches in diameter at the small end. Another camp has a wooden tramway.

Logs have not yet been cut more than a mile or two from deep water, and no driving in the small streams has been done, or apparently thought of. There are numerous suitable streams in the timber regions, but they would require much costly improvement to suit them to floating the heavy timber. No system of collecting crown dues on stumpage is there in operation, as in other parts of the Dominion, and nothing is done by the local government to assist the lumbermen in the matter of making improvements. Anybody can enter government land, having perfect freedom to cut timber anywhere. Government land and the timber on it can only be secured by purchase. The camps are well arranged, and the tables excellently supplied. Every man furnishes his own bedding.

In felling the giant Douglas fir, chopping boards are employed, six or seven feet long, and six or eight inches wide, shod with iron at one end, the same as are used in the red wood regions, which are driven into notches cut at the proper height. On these the choppers stand. They are sometimes placed 10 feet from the ground, to avoid shakes, as the logs are not butted after felling, and for the reason that the fir trees are much harder near the ground than a little higher up.

The wages of choppers and teamsters run from $50 to $75 per month, and those of sawyers and road cutters from $25 to $40. The amount realized by the men is more or less reduced by the time lost during unfavorable weather, when their board is charged against them.

The mills are somewhat different from those in the eastern part of Canada. The logs are canted and rolled by machinery, dogs not being feasible. All the appliances have greater weight and strength than is required for pine. The square timber is sawed, and none hewed. The edger tables travel backward and forward, and the trimming saws are swinging ones. Every mill has a planer in connection, which dresses the green lumber, as it comes direct from the saw.

The export trade is heavy in spars, for which the timber is particularly suitable, on account of length, strength, straightness and elasticity, and the exporting has been chiefly confined to the two mills of Burrard Inlet, owned by the Moodie Saw-Mill Company, and the Hastings Saw-Mill Company. Cargoes are sent to China, Australia, India, Sandwich Islands, South America and Great Britian. The American duty on manufactured lumber has prevented the British Columbian interests from competing very extensively with their Puget Sound rivals. The timber at a little distance back from the coast is the best, but the advent of logging roads will increase the expense.

The common men employed in the mills get from $30 to $40 per month and board, and the more expert from $35 to $50. Sawyers and engineers get from $50 to $75. The two Burrard Inlet mills, the largest in the province, cut 15,000,000 feet each in 1882.

Indications as to the quality of trees are radically different in the fir from those of pine and an expert in the latter finds himself off his reckoning with the former. Lumps that would show the presence of knots in a pine tree may mean no inferiority in a fir, which, however, may also be full of knots without exterior evidence of it. Large quantities of the Douglas fir cover the mountain sides, while good red cedar for shingles and fencing is found along the river bottoms back from the shore line. Farther north the pine disappears, to be replaced by white spruce aud white cedar, and above the parallel of 52 degrees latitude the pine almost completely disappears, and the spruce is abundant. The latter grows very large, aud generally straight and without knots, making tough light lumber for building purposes, which works well under the plane. The white cedar abounds above the parallel of 54 degrees, also a splendid wood, tough, close in grain, and readily worked. It is asserted that it is proof against the boring teredo, which renders it useful timber for wharf piles. It is much favored for shipbuilding, and is said to endure equal to the best oak. Hemlock abounds everywhere, but is chiefly esteemed for its bark. The arbutus grows on the south end of Vancouver's Island, and on the islands in the Gulf of Georgia. There has been severe weather in the province this winter.—*Northwestern Lumberman.*

SCHEDULE SHOWING THE NUMBER OF SAW-MILLS IN THE PROVINCE OF MANITOBA AND DISTRICT OF KEEWATIN, OPERATING UNDER GOVERNMENT LICENSE DURING THE YEAR ENDING 31ST OCTOBER, 1882.

MANITOBA.

Name of Owner.	*Where Situated.*	*Kind of Power.*	*H. P.*	*Capacity per 12 hours.*	*Commenced operations in*	*Kind of Timber.*	*Logs Cut at*	*Quantity of Lumber manufactured during year ending 31st October, 1882.*	*Quantity of Lumber sold; on hand 31st October, 1881, and manufactured to 31st October, 1882.*	*Quantity of Shingles manufactured during year ending 31st October, 1882.*	*Quantity of Shingles sold; on hand 31st October, 1881, and manufactured to 31st October, 1882.*	*Quantity of Lath manufactured during year ending 31st October, 1882.*	*Quantity of Lath sold; on hand 31st October, 1881, and manufactured to 31st October, 1882.*
								Ft., B. M.	*Ft., B. M.*	*Ft., B. M.*	*Ft., B. M.*	*Ft., B. M.*	*Ft., B. M.*
Adams & Schneider	Pine Falls, Winnipeg River	Water	62	10,000	1879	Spruce	Winnipeg River	2,132,862	2,067,387				
Armitage & McCulloch	Minnedosa	Steam	25	6,000	1880	do	Riding Mountains	647,504	410,113	664,832	664,832	269,200	117,650
Brouse, Geo. J.	Bad Throat River	Water	90	10,000	1879	do	Bad Throat River	199,910	199,910	786,000	786,000	105,000	105,000
Cameron, Alex	Rolling River	do	25	6,000	1878	do and poplar	Riding Mountains	537,500	250,471				
Dick & Banning	Whole River	Steam	25	6,000	1879	do	Whole River	1,075,608	1,308,950				
Friesen, A	Steinbach	do	20	4,000	1879	do	Township 7, Range 8, E	14,200	14,200	115,000	115,000		
Fox, Thos. L	Turtle Mountains	do	16	3,000	1881	Poplar	Turtle Mountains	53,509	50,785	3,500	3,500		
Jonasson, Frederickson, & Co	Icelandic River	do	20	5,000	1881	Spruce	Icelandic River	752,784	468,917			243,000	219,500
Kent, James	Birtle	do	25	6,000	1880	do	Bird Tail Creek	1,292,035	1,076,146	499,750	475,750		
Leacock, E. P	Bird Tail Creek	do	15	2,000	1880	do & tamarac.	do	253,450	237,658				
Mitchell & Byers	Township 10, Range 16, W	do	16	3,000	1880	do do	Township 10, Range 16, W	315,345	503,824	308,250	302,500		
McKay, James W	Township 10, Range 15, W	do	25	3,500	1880	do do	do do	48,400	49,460	138,100	209,500		
McFadyen, David	Odanah	do	30	5,000	1880	do	Riding Mountains	213,000	168,500				
McIntosh, Robt. (assigned to J. W. Douglas)	Rapid City	do	20	4,000	1879	do & tamarac.	do	300,024	289,066				
Pratt, W. J. M	Totogan	do	40	10,000	1879	do do	Fairford River, Lake Manitoba	502,826	598,326	627,250	627,250		
Rogers R. Z	Millford	do	20	3,000	1880	do	Township 7, Ranges 15 and 16, W	35,000	35,000	License cancelled.			
Ross, David	Whitemouth	do	35	6,000	1880	do & tamarac.	Whitemouth River	1,828,439	1,828,439				
Smith, Samuel	Turtle Mountains	do	20	3,500	1881	Poplar	Turtle Mountains	88,494	79,484	292,000	291,250		
Sprague, D. E	Winnipeg	do	45	20,000	1880	Pine	Roseau River	1,094,234	1,504,234				
Shields, Haggart, McLaren & Co	Brandon	do	35	12,000	1880	Spruce&tamarac	Shell River	1,043,582	802,072				
do do	Shell River	do	15	3,000	1882	do do	do	Returns not received.					
Shore, Edmund	Big Black Island	do	30	6,000	1876	do	Big Black Island, Lake Winnipeg	647,986	647,986			643,450	643,450
Williams & Harrison Bros.	Wateopa	do	20	5,000	1880	Poplar	Turtle Mountains	301,985	185,499	192,000	272,000		
Walkley & Burrows	Mouth of Winnipeg River	do	25	6,000	1878	Spruce	Catfish Creek	1,400,000	1,593,032	160,000	102,700	70,000	178,000
Whimster & Kayll	Strathclair	do	25	6,000	1880	do and poplar	Riding Mountains	33,166	116,963	33,250	48,250		237,000
Watts, A	Norquay	do	Mill burned down in Spring of 1882.										

KEEWATIN.

Macaulay, W. J. (assigned to Dick & Banning)	Rat Portage	Water	100	60,000	1881	Red &white pine	Lake of the Woods	3,506,794	2,436,568			74,850	74,850
Keewatin Lumbering and Manufacturing Co	do	do	400	120,000	1880	do do	do	7,147,204	7,447,390	2,622,250	1,621,500	845,600	1,078,200
Fowler, S. H. (Assigned to Rainy Lake Lumber Co	do	Mills being erected.											
							Totals	25,465,841	24,470,380	6,442,182	5,520,032	2,251,100	2,654,550

A GOOD FOREST LAW.

"I never remember a session in which we worked so hard and did so little," said Mr. Jolly. It would be well to give credit and do justice to two really valuable measures which were carried. We allude to two bills of Mr. Lynch's, one to guard against forest fires, and the other, far the more important, to divide the forest domain into settlements and timber lands. The idea, it is true, originated in the useful forestry congress held last year in Montreal, but none the less does the credit of having worked it out and put it into practical shape belong to the Commissioner of Crown Lands. Those who know anything of our Crown Lands can bear testimony to the fact, that the most dangerous man the lumberman has to deal with is the make-believe settler, who establishes himself in the midst of good timber lands, for the purpose of stripping his lot and the surrounding lots of any valuable timber that may be on them, and then, having ruined the property, abandons it. The fact has been stated over and over again, and never questioned, that we know of, that the great majority of the disastrous fires which have desolated miles on miles of choicest timber lands, are due to these people. Mr. Lynch's law promises to put a stop to this kind of settlement, in the future. Nor is there any danger to be fairly apprehended to the colonization interests of the country, from the measure, because it is well known that good pine and spruce land is the worst settlement land that can be found. When the bill was first introduced Mr. Lynch happened to be unavoidably absent, and Mr. Blanchet took charge of the measure. Mr. Flynn attacked it vehemently, in the interests, he said, of colonization. As a rule, Mr. Flynn can give a plausible reason for any side he may choose to take, however wrong he may be. In this case, as ex-Commissioner of Crown Lands, he laid down the law with some authority, resting himself on a number of facts more or less controvertible, and brought to his aid Mr. Picard and a few more country members, who never seem happy except when expatiating on the hardships and defending the interests of the "poor settler." The bill had to be allowed to stand over. Immediately on Mr. Lynch's return, he took the bill up and carried it triumphantly, almost without a dissenting voice. It is needless to say that the Commissioner, in his really eloquent defence of his measure, was vigorously backed up by Mr. Joly, who takes the greatest interest in all that pertains to our woods and forests. The act will prove a substantial benefit to the lumbermen, who will no longer be harassed by the petty pilfering of mock-settlers, and who, moreover, will be freed from the much greater risk of loss through their negligence in making fires under pretence of doing settlement duty and clearing land which every one knows they never intend *bona fide* to settle permanently upon. It will prove a no smaller, or more inconsiderable, boon to the real settler, since it will direct him to land upon which he can hope, by hard work and hard living, ultimately to establish a comfortable home and earn a respectable maintenance. While, if left to himself, he might do as others have done before, establish himself on some of our pine lands, in order to secure employment in winter in the adjoining shanties, and after years of work and hardship and suffering, succeed in clearing his land, only to find that, between the stones and the sand, it virtually is valueless, so much labor thrown away and hard toil lost. It is a pleasure to draw attention to these facts, because we think credit should be given to a really conscientious, hard-working, clear-sighted public officer, and such, we know, is the character with both Conservatives and Liberals, Government supporters and Opposition free-lances, are willing to concede to the Hon. Mr. Lynch.—*Montreal Witness.*

FATE OF A RIVER IN SPAIN.

A correspondent of the *Lumber Trade Journal* says:—A gentleman who appreciated the efforts of Congressman Cox, of New York, to mitigate the inordinate slaughter of our forests, wrote him a letter from which these extracts were taken:—

As I frequently have gone to Spain for some years past, I have had opportunity to observe there the result of devastation of the forests which has continued during the last few hundred years. Let me tell you the condition of a once noble and important river, the Almeria.

About six miles northeast from the city of Almeria is Pechina, once an important town where shipping was carried on. There may yet be seen the wharves and stone buildings that served the purposes of commerce a few hundred years ago.

Now the former river is dry land for six miles, even to the edge of the Mediterranean. What was once a noble, navigable river is now a level sand waste.

In the course of time, as the forest have been cut off and the natural means of retaining the moisture in the mould and alluvial covering of the mountains and hills has been destroyed by the washing down into the river-bed, the mountains have become bare and desolate. The infrequency of rains there has become a matter well known. When they do come, the river bed is a roaring flood, and "straight is dry again." By this the shoal at the mouth of the (once) river is constantly extending into the sea, so that immediately after one of these floods it has been known to have extended half a mile.

Whether this is a part of a divine plan, and so ordered to be, or whether it is a retribution of the Divine Providence upon a country and a people for not husbanding the resources so abundantly provided, may engage the attention of some for the sake of an argument; but to me it is a lesson that we should profit by. What will our vast country become if the forests, furnishing the supply of our rivers, and so graciously withholding and distributing it through the seasons, are to be devastated;

And what country in the world was ever so prodigal of its wood as this? Ties for the supply of 100,000 and odd miles of railway alone is a tax upon the forests of even this great country formidable to think of.

Thus devastated, and the alluvial covering of the hills and mountains of river sources washed down as they are in Spain, we may picture the Hudson, Delaware, Susquehanna, James, Ohio, Missouri, and even the Mississippi mere sand beds; and in future time history may record the navigation of those (once) streams, and be illustrated with pictures of steamers that plied upon their waters in busy commerce "of old."

W. D. M.

DRIVING BELTS.

BY ROBT. GRIMSHAW.

The weight of a horizontal or of a slightly inclined belt connecting horizontal shafts should be sufficient to cause it to sag or belly well down, increasing the arc of contact; but it should not be sufficient to cause excessive pressure on the bearings.

When the horizontal shafts are one above the other, or nearly so, and the belt vertical, or nearly so, the lighter the belt the less it is dropped down from the pulley, and the less the loss of driving power by imperfect contact on the lower pulley. The smaller the lower pulley, and the greater the distance between shaft centres, and the thicker and stiffer the belt is, the more these remarks apply.

Where a belt connects vertical shafts, lightness is very desirable, as a heavy belt in such a position tends to come off both pulleys, unless they are either very crowning or are flanged on their lower edges; in which latter case the lower edges are apt to become frayed or stretched, according to the material,

Horizontal belts between vertical shafts drive better than inclined ever do, and still better than vertical. The reason of this is evident; the weight of a horizontal belt tends to increase not only the arc of contact in both pulleys, but the tension; and the further from the horizontal, the less the driving power.

In this connection it must be borne in mind that where a horizontal belt connects horizontal shafts, the lower fold should be the driver, so as to make the "sag" or "belly" as little of a disadvantage as possible.

New unprepared canvas belts had better be rubbed with hard bar soap before putting them on the pulley. This gives them a smooth, finished surface, improving the grip and pliability. —*Woodworker.*

Barking Hemlock.

The *Courier and Journal* of Potsdam, N. Y., calls attention to the fact that the bark-peelers are making havoc with the hemlock of that part of the State the value of which, for timber and lumber purposes, is becoming more apparent since the spruce is being so heavily drawn upon for supplies. The paper referred to says: "Few people realize how rapidly the hemlock is disappearing from our forests. It is destroyed not only for timber or fuel but almost solely for the sake of its bark. Lumbermen have proposed to attack the hemlock when the spruce shall have been used up, but against the unscrupulous rapacity of the bark peelers and tanneries, hemlock has no show for existence. All through the Adirondacks these trees are fast falling, and their stripped trunks show that the insatiable appetite of the bark mill has been felt even there.

THE correspondent of the *Northwestern Lumberman* at East Saginaw, Michigan, says:—McArthur Bros., a Canadian firm who are operating in this latitude, inform me they have put in 300,000 feet of board pine, 100,000 feet of oak timber, 50,000 pipe staves, and 3,000,000 feet of long and short pine logs.

AMERICAN SAWS:

We represent Four of the Best American Saw Factories

VIZ.

AMERICAN SAW Co.

Emerson, Smith & Co.

R. HOE & Co.

Hubbard, Bakewell & Co.

Inserted Tooth,

BIT TOOTH,

AND

SPECIALLY

THIN

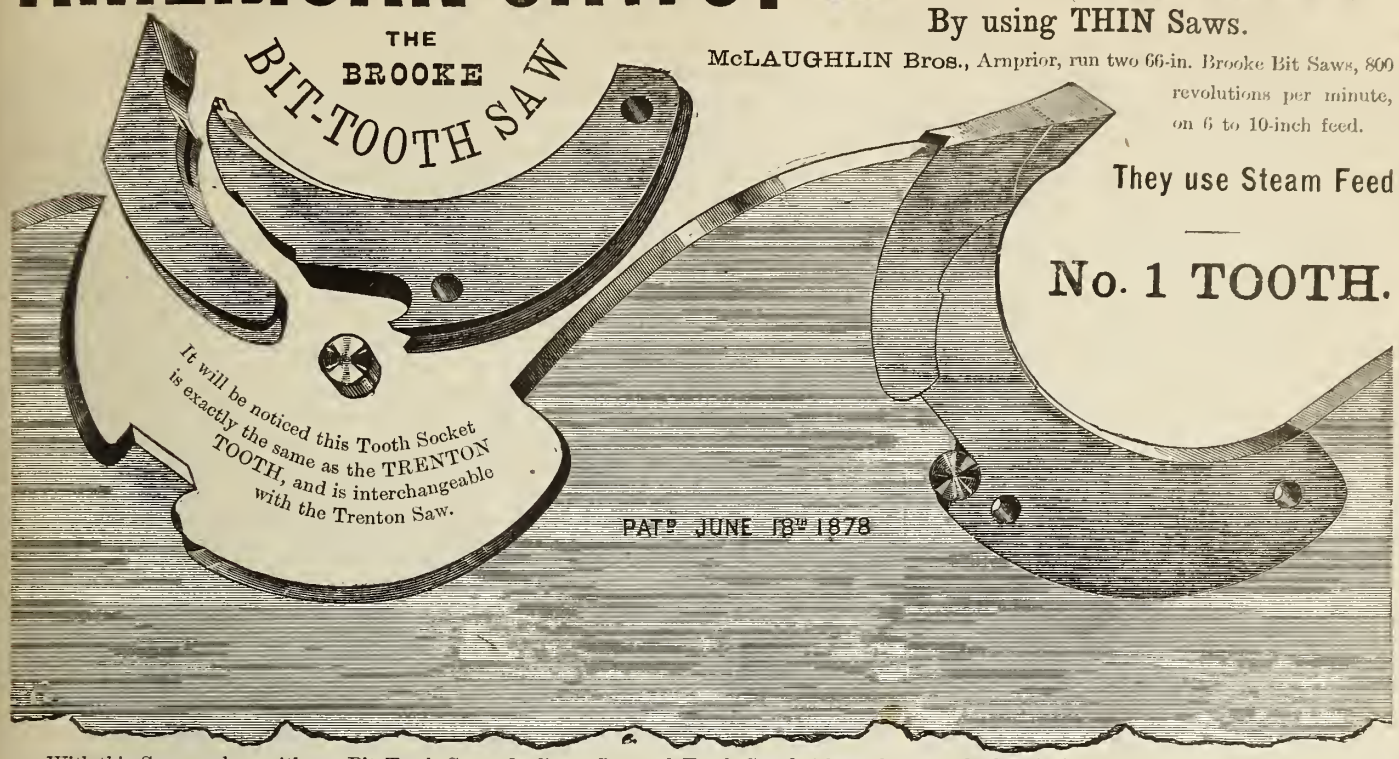
SOLID SAWS

☛SAVE YOUR TIMBER
By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute, on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW



No. 1 TOOTH.

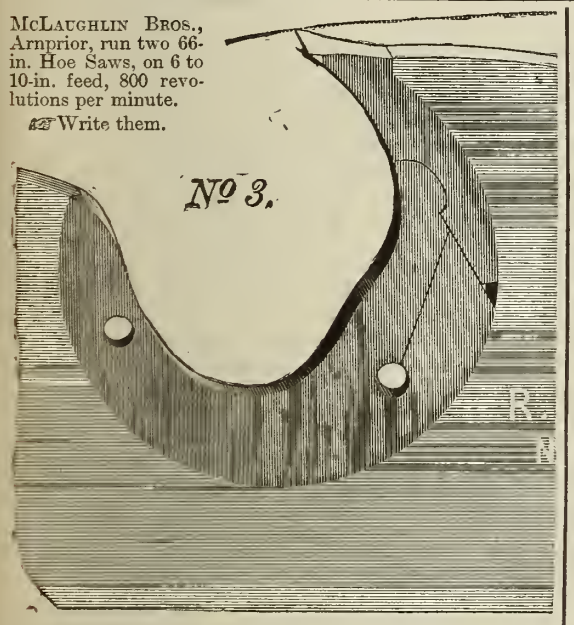
With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. EXTRA BITS (per 100) No. 1. $9; No. 2,$8.—(per 1000), No. 1, $80, No. 2, $70.

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

McLAUGHLIN Bros., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

☛Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut represents usual size tooth, one size larger and smaller made. ☛Send for particulars and prices.

SAVE TIMBER GROW RICH

EMERSON'S EXTRA THIN SOLID SAWS

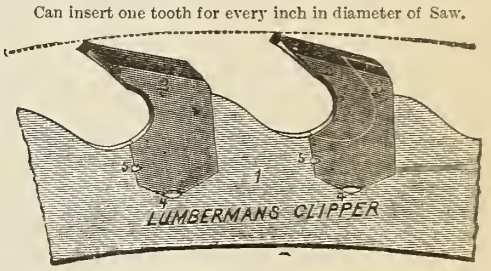
Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56; 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☛NO EXTRA PRICE FOR THIN SAWS.☚

EMERSON'S LUMBERMAN'S CLIPPER SAW

Can insert one tooth for every inch in diameter of Saw.

Extra Teeth 25c. each.



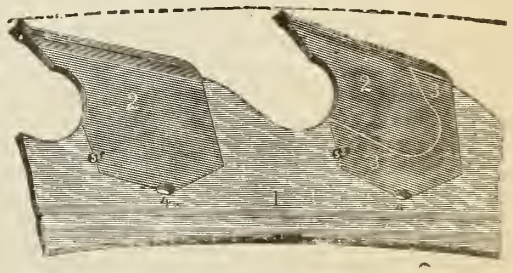
Extra Teeth 25c. each.

Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

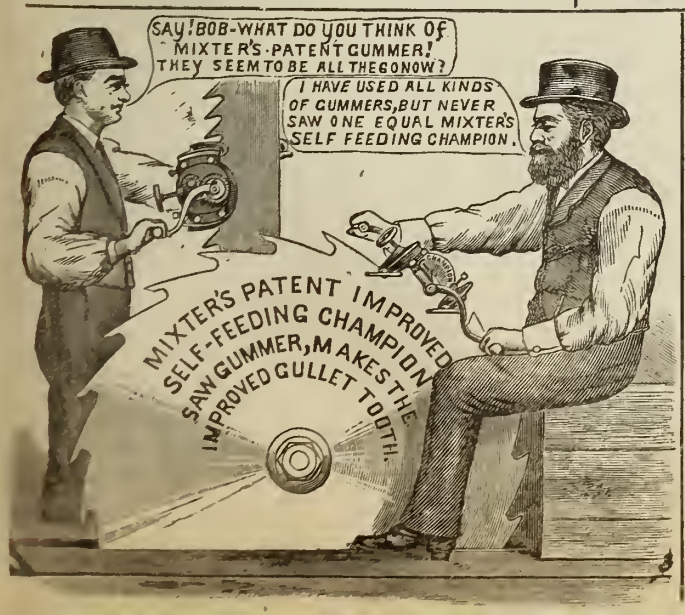
The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.

Extra Teeth 50c. each.

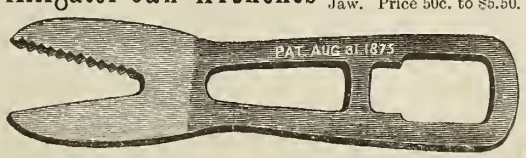


Two and a half inches long



Alligator Jaw Wrenches

5 sizes, grip from ½ to 3 inches, Iron. Solid Steel Jaw. Price 50c. to $5.50.



Cut represents No. 1. Larger sizes have Solid Handles.

WE KEEP IN STOCK ALL KINDS OF

Saw Mill Furnishings

SAW GUMMERS:—Stone's Original, large and smal size; Mixter's Self-feeding Champion; Emery Wheels and Stands.

SAW SWAGES:—Hoe's, Emerson's, Mixter's, and American Saw Co.; from $1.50 to $6.00.

SIDE FILES, BELT STUDS, Detachable Belt Fastners.

JARECKI'S PATENT SCREW, PLATE, and PIPE CUTTER, ½ inch to 2 inches, $28.00; smaller ranges in proportion.

Band Saws, Scroll Saws, Rainbow Saws for felling trees, American Shingle Saws, Lace Cutters. Cant Hooks. Flue Scrapers, Leather, Cotton and Rubber Belting.

SPECIAL AGENTS FOR GANDY'S PATENT MILL BELT, runs wet or dry; the best and cheapest main driver.

WORTHINGTON and BLAKE'S PATENT STEAM PUMPS. ECONOMIST PLANER and MATCHER COMBINED, large range of work, light, handy, durable, cheap.

Ewart's Detachable Chain For Log Jacks, Refuse Carriers, Sawdust Carriers, all sizes, Live Rolls, Tranfers, Slow Speed Driving Belts, Tie Loaders, Slash Tables, Trimmers, Lumber Sorters, Shingle Block Elevators, and many uses about a saw mill.

HIGH CLASS HEAVY and PORTABLE SAW MILL MACHINERY our Specialty.

Waterous Engine Works Co., Brantford

Send for New Price List and Chain Circular. ☛Mention this Paper.

DIFFERENCE BETWEEN DRY ROT AND WORM-EATEN WOOD.

Dry rot is a term applied to damp wood under process of destruction by fungi, or low forms of vegetation. The albumen and the essential oils in the wood become the food of this secondary or parasitic vegetation; the woody tissue is broken up, and the walls of the cells destroyed, an earthy, powdery matter being left as the residue. This residuo bears on its face a close resemblance to burnt or charred wood. Indeed, it is akin to burnt wood, for the albuminoids and the essential oils which escape under the influence and form the flood of fire, have been consumed or absorbed by parasitic vegetation. The residue, an earthly, inflammable substance, is practically identical with that resulting from fire. Dry rot, or the destruction of wood by secondary forms of vegetation, is dependent upon two conditions—heat and moisture. To prevent dry rot, the wood is dried or seasoned, by which one of the elements is withdrawn. To guard against the return of this one element, the wood is painted or varnished, and hence the general application of paint or varnish. Where wood can not be painted, preservatives are used, the object of which is to change the character of the wood, so far as its secretionary matter is concerned. In this direction, creosoting is the most common or customary, the object of which is to poison the albuminoids and the essential oils, and so render them unfit for food to low or secondary forms of vegetable life. Salts, sodas and metallic injections have the same effect, but they are in a large degree soluble in water, and in course of time become weak or disappear, and consequently they are not so largely or generally used as creosote oil. The amount of moisture necessary for the support of the secondary vegetation is very large. This is supplied by humid or stagnant air, or by damp walls or subsoils, and hence it follows that wood subject to passing air, or brought under the influence of vegetation, is free from from this disease or dissolution.

Worm-eaten wood is wood injured by mechanical action—*i. e.*, by animal life. The same conditions are imperative to the support of this form of life as to the above, but the amount of moisture necessary in this case is very small compared with that required for the support of vegetation. Wood to be worm-eaten must be subject to damp, humid, or stagnant air, and it must be a sweet wood, or the sap of a bitter or pungent wood. Ash, elm, walnut, birch, beech, and limo tree are sweet woods, and very subject to worm. Oak and resinous woods are bitter, pungent or unpalatable, and, except in the sap wood, are fairly free or proof against the attack of worms. Under certain conditions, as in the roofs of churches covered down with lead, where condensation of the atmosphere ensues, and the wood absorbs moisture, the heartwood of even oak will fall a prey to the action of worms. In some cases the necessary moisture is supplied by the ends of the beams being inserted in walls, the materials of which are porous stone. Here the damp ends of the beams will be riddled with worms, and, spongo-like they will crumble away, and, if not supported, will fall clear of the walls. The heartwood in this case seems to have lost its pungent qualities and to have become soft with long saturation; but, not having been soizsd upon by fungi, to still retain its albuminoids, and to be sufficiently endowed with them to form the food of worms.—*Furniture Gazette.*

LOCATION OF A MILL.

The following contribution by T. G. Langdon, appears in the Indianopolis *Woodworker*:—The very first thing that should command the attontion of a person or company going into the lumber working business is the location of the mill. For a local retail trado a point in the centre of business is the great thing to be gained, and for a wholesale shipping trade to be near a place where putting lumber on board of cars or vessels or both, is the great end in view. But there is one thing common to both these trades which should be the first and great objective point: Ease of getting stuff to and from the mill, with the least trouble and expense of moving the stock. Every man that knows about lumber knows that it costs a great deal to handle it, and and if it has to be handled over three or four times where it needed to be moved but once, there is added a very great percentage to the cost of production, and if he has to compete with mills in the same business he will find himself doing less business with a larger amount of help, who are worked harder, and not producing as much as the company who has taken greater pains to have a mill where lumber can be handled at the least possible expense. The first point I would make is to have a mill located on perfectly level ground, so that teams with heavy loads as lumber teams usually draw can come and get away easily, and so that no help in or about the mill shall be used to load or unload teams. I do not take into account the item of insurance as a recent writer has done, for "constant vigilance" is the price of safety in planing mills. Sometimes mills are set on fire by catching from other buildings, but very much oftener they are caused by carelessness, not only of employees, but from owners themselves, who neglect to keep all places around the furnaces properly bricked up and partition walls made sound and secure from any possibilities of accident in that direction. One great thing in locating a mill is getting on good, firm ground, so that after the mill is up and the machinery in it will not be constantly settling down, which would be a constant source of annoyance from the shafting being always out of line and consequently always going hard and often breaking. Of course there is a remedy by piling, but piling if properly done is costly, and the land that must be pilod to set a building on almost without exception cuts off having a basement, which I consider a great advantage, because it is so desirable in all wood working machinery to belt from below. In places, however, which are affected by tides and overflowing of rivers I would by all means keep everything above water. The belting can be managed easy enough, only keep it out of the water. The great objectivs points is to have plenty of room in and about the mill—outside for keeping lumber and conveniences of getting around, and inside for handling and working it. It is very good to have pleuty of room to expand in, for everybody expects to increase their business and consequently they want room to do it in. Have a good reserve on hand so if you go into market and find somebody hard up and anxious to sell a million or two feet of lumber at a good discount, you have just enough room to put it in and not crowd you.

Now to a company just going into the lumber working business I would say, first sit down and count the cost, and provide yourself with ample means before starting, and having secured that, make a good plan of everything you want in your business, yard room (if you run a yard) with ample space for piling your lumber, and good avenues between the piles for teams to load and unload, and good generous sheds for storing nice dry dressed or rough lumber, with projecting roofs so teams can load and unload in storms without danger of getting stock wet; also a place for a good, generous dry-kiln, where a team can drive in and unload instead of leaving it outside and then have to carry it in by hand, thereby adding a large percentage of cost to production which *somebody must pay for.* And here will be a great item to be provided for. Plan if possible so that when a load of lumber is drawn in it can be left just where you want it, and not have to be carried even the shortest distance. Just here I want to contrast two dry-kiln rooms which I know of to show the difference in the cost of filling each.

In the one the teams drive alongside a shed, and breaking it across the wheel the teamster passes it up to the man on the shed, who carries it about 50 feet to a door where another man takes it and carries it 50 feet more and leaves it across a horse at the door of a dry room, where two men stick it up. The other case is a dry house on good level ground. The teamsters backs in and throws off his own load without help from anybody, and does it in half the time the other teamster can pass his load to somebody on the shed. In the first case the company want to utilize the heat from the boilers, and in the other the man wants to avoid the danger of fire by having the dry house away from the mill, and also to take as little help as possible to fill the dry house. To you who run lumber mills I will leave to decide which of the two are using economy in the matter of drying lumber. I bring this item of drying room in merely to show how much can be saved by having ample room for every needed convenience around a planing mill. To those not using a dry room it does not apply, but there are so many establishments that do use one that it is well to have them so that we can use them economically. Perhaps a great many will say, they have been long established and it would be at great expense to overhaul everything to suit their ideas of convenience. They are getting along comfortably well and making fair profits as they are, and are perhaps acting the parts of philanthropists in giving more employment to those who are needy and want the employment to support their families. This is all very well, but those who have to use lumber have to pay for the extra cost of production in some form or other. I know of several mills which if years ago some stray spark from a locomotive or some spite of an incendiary had caused them to be entirely burned up, that would, if built up with every convenience, have been far richer men to-day, and in some cases I think been kept from bankruptcy. In conclusion let me repeat: If you are intending to go into the lumber-working business in any form whatever, give yourself plenty of room for all your wants and a good reserve for increase of business. It is cheaper to own land and pay taxes on it than it is to hire a little nook and corner here and there, and pay a large rent to those who know they can make you, because you *must* have it, even if it is inconvenient. I know of parties to-day who would pay a much higher price for adjoining land for yard room than the land would cost in the market, and who could have had the same land a few years ago for a nominal price, and now they are paying twice the amount that the land would have cost them every year for rent. Other parties saw the future value of the land and wisely secured it, and it cannot be bought now. I have spoken in this article of the desirable outside convenience of the lumber-worker. In another I shall speak of the inside accommodations.

BOOMING PROFITS.

The *Northwestern Lumberman* says:—Since it has been proposed to restrict the charges of the boom companies in Michigan, there has been considerable discussion on both sides of the question. The proposed amendment is that the net dividends of the companies, after paying for all repairs, running expenses and losses, shall not exceed 20 per cent. on their capital stock in any one year, or 10 per cent. if the whole amount of capital stock has been paid to the stockholders. The following argument and figures are from the Saginaw *Herald*, the figures showing conclusively that stock in a Michigan boom company is a good thing to have:—

"The very nature of a boom company's business renders the occupancy of the river exclusive. Only one company can do business at one point. All the shores suitable for booming purposes are bought up or rented by one corporation. Logs cannot be stopped above its booming ground to raft and sort them; and below are the lakes, where the logs are lost if they have not been stopped and rafted. Under such circumstances competition is impossible. The monopoly is perfect, and whoever floats logs upon the stream must pass the boom and submit to the company's terms or run the risk of losing his property.

"Now, no man, however honest—and certainly no corporation—should be trusted with unlimited power to levy on other men for contributions. Such a power is sure to be abused. Yet the boom law of 1864 leaves this very power with every boom company, for it fixes no limit to the amounts which they may wrest from the log-owners to divide among their stockholders.

"The records of some of the largest companies in the state have been examined to show how they used their powers.

"The Manistee River Improvement Company, starting with a paid-up capital of $22,000, raised it to $100,000 by stock dividends, and in two years—1873-'4—divided among its stockholdsrs a greater sum than the whole amount of capital stock paid in by them.

"The Muskegon Booming Company began with a capital of $40,000, and ran it up in the same way until it reached $200,000. In 10 years it paid $246,265 in cash to its stockholders, and met, besides, all its expenses and losses, and paid for its improvements. In a single year it divided 200 per cent. on the whole cash capital originally paid in, and its cash and stock dividends for the ten years swelled to 1,100 per cent. on that sum. It still holds its $200,000 of nominal capital as the basis of future exactions to be continued while mills stand at Muskegon and logs are floated to them.

"The exactions of the Tittabawassee Boom Company have been more moderate. It is by far the most important corporation of the kind within the state. It has some thirty stockholders, of whom no one owns a controlling interest. It has watered its stock 100 per cent. only; and it has volunteered to reduce its dividends to a lower point than the other boom companies would consent to. But even this company, within the first two years of its existence, paid back to its stockholders in net dividends an amount of $15,000 greater than the entire capital ever paid in by them, and having thus reimbused them, it started out in 1867 with a capital stock which cost them $15,000 less than nothing, and has gone on collecting dividends varying from thirty to eighty per cent. and amounting in the aggregate, at the close of the present season, to $375,000 over and above all expenses, repairs, improvements and losses. Its average cash dividend for the first ton years was 47 per cent., and its total cash and stock dividends from 1865 to 1882 aggregated $425,000—an advance of 850 per cent. on its actual capital.

"Such facts as these abound also in the past and present management of other companies. Some of them, in defiance of public opinion, and against the protests of large minorities in their own board of directors, persist in demanding dividends twice as large as in the instances referred to. This is notably the case with the Rifle River Boom Company. But enough has been stated to show the need of legislation. What it shall be is for the legislature, to which this appeal is made, to determine.

"Uniform treatment of all companies, and a uniform measure of protection to all citizens, is indispensable to a just law. The price of rafting logs cannot be fixed in advance, and cannot be uniform. It must vary with varying conditions. But the profits of companies can be made uniform, for the profits of any corporation consist only of the dividends earned on its capital stock. In this respect the proposed legislation is most liberal. A company that could guarantee an annual dividends of 10 per cent. while it continued in existance, and the repayment of all its capital to its stockholders when it should be wound up, would command a high premium for its shares. But is better yet for the stockholders if they can have their capital paid back to them almost at the outset, and still have the right to a heavy dividend so long as the corporation continues.

"Another reason for this legislation is that it removes an apparently unjust discrimination in favor of capital as against labor. Capital and labor furnish the whole service of rafting and booming. The capital is worth from 4 to 7 per cent. per annum in the open market; and labor from $1.50 to $3 per day, if there is free competition. Now, if the laborers should combine to take possession of the outlet of a river, and should arrogate to themselves the sole right to do the labor at that point, fixing their own price and excluding all other men from competition, it would be an illegal act, to suppress which the military power of the state might be invoked. But no less vicious is it, even if done under the forms of law, that a few men should monopolize the booming grounds at the mouth of a great river; organize a boom company under a state law that fails to protect any one but the corporation formed under it; fix their own arbitrary valution on the property used or capital employed; exclude all competition, and then enforce the payment of any rates they choose for services rendered.

"Another reason for this legislation is, that without it there will never be uniformity of charges. While some companies are strongly influenced by public opinion, and, without legislation, reduce their charges, others, owned lar-

gely by men living out of the state, care no more for public opinion than the owners of railroad shares or lottery tickets. One company is satisfied with a dividend of 15 per cent.; another wants 20; and another will take nothing less than 30, and figure that upon its capital, watered stock and all.

"A general law alone can balance the scales of justice between the different companies, and between them and the citizens who are compelled to employ them."

FORESTRY IN THE NORTHWEST.

The Winnipeg *Commercial* says:—No question gathers around it much greater interest to the people of Manitoba and the Northwest than that of forestry. The preservation from unnecessary destruction of what timber we have, and the reproduction of sufficient to take the place of what is cut every winter is a subject for serious consideration by all. At a recent meeting of the American Forestry Congress, Prof. Sargent, of Harvard, read a paper in which he touched upon the matter. Referring to it, he pointed out that the question of tree planting must arise in the Northwest, and the sooner it is grappled with the better for the welfare of the future millions who are expecting to people the vast prairies west of Winnipeg. In the matter of fuel alone, its importance may be estimated from the fact that there are extensive tracts of western territory where the farmers journey from ten to twenty miles by wagon or sleigh in order to obtain fuel, or where they have to rely solely on the wood train which at intervals supply them; and such farmers are often exposed to positive suffering when extensive snow blockades take place. The prairie farmer indeed soon knows the value of a belt of trees upon his farm, not merely as a source of fuel and fencing, but even more as a windbrake, warding off the fierce blizzards and in summer sheltering his growing crops, fruit trees and stock from the strong prairie winds which, developing into storms, cause almost every season vast injury.

It is not at all improbable that the planting of forests on the prairies in Manitoba, Dakota and Iowa, will be the solution of that most embarrassing problem—the grasshoppers—by affording obstruction to the high winds which bring these insects from their habitats farther west, and by furnishing suitable homes for myriads of birds which would keep the increase of the grasshoppers in check.

The planting of forests will also probably solve the question of the successful growth of fruits in Manitoba and the North-West. Fruit trees need protection alike from storms and from parching winds, and especially in our western prairie country is this necessary. It has been laid down as almost an axiom in the Western States, that the forest trees must precede the fruit trees in order to afford such protection.

In Minnesota an earnest effort has been made to encourage the planting of trees. A State Forestry Association has been organized, and annually offers premiums for the largest number of trees planted on a day in May denominated Arbor Day. It is estimated that in the spring of 1877 there were 5,290,000 trees planted in Minnesota, and of these over half a million were put out on Arbor Day. During the entire planting season of that year it is believed that about ten millions of trees were planted, and of these, that about 70 per cent. have lived.

The question of tree planting is one which should be actively taken up at once in our North-West. The Government of Manitoba could not grapple with a more pressing subject for legislation, unless it be drainage. The greatest drawbacks against which the North-West has to contend, from an agricultural point of view, are wet lands, scarcity of timber and liability to high winds, and, in some localities, to summer frosts. Dakota and Minnesota have equally these drawbacks? The Manitoba Legislature has taken up the question of drainage, and active efforts are now being made in some parts of the country to reclaim the wet lands. To cope with storms and frosts seems hopeless, and yet experience has found the great value of belts of trees around each farm as affording effective shields against these. What the Government there should do is to promote Forestry Associations, and to in every way encourag tree planting by exemption from taxation or by direct premiums or bonuses. Any such encouragement successfully followed up will be returned one hundred fold in the larger and more certain crops, the store of wood for lumber and fuel created by the growing timber, the relief from the monotony of the prairie landscape through the belts of trees dotting the scene on every side, and not least, in a more contented and prosperous community of farmers.

ST. JOHN, N. B.

The St. John, N. B., *News*, of March 26th, says:—It is impossible at present to speak with any certainty of lumber prospects for the coming season. Builders are beginning to make inquiries for spring stock, and appear to expect to pay smaller prices than they did last year. Dealers are, however, holding off for better figures, as the cost of operating in the woods was much heavier this year than formerly. Reports from abroad so far favor the purchaser, and if the European markets do not brighten—which is hardly to be expected—there must be a general decline in our home markets. The changes in the American tariff have certainly not been in our favor, and no marked increase to our trade in that direction can be expected. Prices remain unchanged.

THE *Northwestern Lumberman* says that one reason why hemlock is not more used in the Northwest is that carpenters so generally object to it. It is more disagreeable to handle than pine, and the man who works it has a regard for his hands. It is harder on tools than pine, which is another reason that the objections are filed. The carpenters in the eastern states, being used to hemlock, will side a building with it without grumbling, and in the western states the knights of the plane will be compelled to handle more lumber than they are now doing, when, it is to be hoped, they will say less against it.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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Daughters, Wives, Mothers, look to your health! The many painful and weakening diseases from which you suffer, dispairing of a cure, can be remedied by that unfailing regulator and unfailing tonic—Burdock Blood Bitters. Ask your Druggists for proof.

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PETERBOROUGH, Ont. APRIL 16, 1883.

HOP poles have taken a tumble in the American market, due to an overstocked market.

A CHURCH is being built in Bavaria entirely of papier mache. It will be large enough to seat 1,000 people.

VENEERING is said to have originated with the art of cabinetmaking, and was used by the Egyptians 2,300 years ago.

ACCORDING to the Grand Rapids' *Times*, the Muskegon lumbermen will fall short 150,000,000 feet of their anticipated cut of logs.

SOME two hundred thousand feet of timber was purchased in Quebec on March 30th for the Grand Trunk Railway from R. R. Dobell & Co

THE Selkirk correspondent of the Winnipeg *Commercial* says:—The lumber left here last fall by the boats for transhipment to Winnipeg, is being moved by the C. P. R. at the rate of 20 cars per day.

OAK barrel hoops are got out on Puget Sound extensively and shipped to San Francisco, Cal., where there is a good market for them, at $22. Hazel hoops bring $5, $6 and $7, according to size and quality.

NEW ORLEANS is destined to become one of the most important lumber markets of the United States. The vast forests of Arkansas, Louisana, and Mississippi will furnish the supply, to be in time distributed throughout the world.

THE *Lumberman's Gazette* says:—Under the new tree-planting law in Canada, it is expected that hundreds of thousands of trees will be planted in the Dominion this spring. It is an excellent law, which it is thought will work admirably.

Pork has become one of the products of logging camps. When one of J. C. Brown's camps, Ogemaw county, Mich., broke up, lately, six or eight fat hogs were shipped to Saginaw. When the pigs throve like that on what is thrown away by the camp cook, the men must have lived pretty high.

THE *Southern Lumberman* says:—Surrounded, as we are in many places, by a virgin growth of timber, it is almost impossible to convince our people that tree planting is a necessity. Looking at our immense forests of to-day, standing in all their primeval beauty, it is difficult to realize that in a few years the best timber trees will have been felled; but it is a certainty, so sure as night follows day.

THE Grand Haven Lumber Company, of Grand Haven, Mich., can boast of the largest log that has been cut this year in the State of Michigan. The log was pine, and was cut about the middle of last month on the company's job at the head of Flat River. It measured 58 inches at the top and scaled 2,916 feet. The log is 16 feet long, perfectly sound, and measuring over six feet across the butt.

WE bespeak the especial attention of our readers for the large advertisement in this issue of the Waterous Engine Works Co., of Brantford. As will be seen they have a great variety of the most approved saws for mills, and supply all kinds of saw mill furnishings of the most improved kinds. The reputation of this firm is too high for it to be necessary for us to dwell upon it, and their customers need have no fear of disappointment.

THE Belleville *Intelligencer* says that in Gilmour & Co.'s limits, near Beaver Creek, the snow is seven feet deep on the level. The shantymen are "winding up" their work on that stream. The cut on that limit will be about 80,000 pieces, Exclusive of teamsters and jobbers 110 men and 80 teams have been employed all winter in the four shanties located in that section. The cut is expected to reach Trenton by the 15th of June.

THE Duluth, Minn., *Tribune* says that the men who are coming in from the woods this spring are pursuing a course rather different from that of former years. Instead of spending the greater part of their earnings in the saloons and in gambling, they are nearly all leaving town for the big farms of Dakota, or to take up claims, or to engage in other work further west. The sale of Northern Pacific tickets at the Duluth station has averaged $500 per day for several days past.

THE *Lumberman's Gazette* says:—Maine has been noted for its lumbering ever since the state was known. An eastern man working in the pineries, is alluded to even at the present day, as "a State of Mainer," no matter what state he hails from. Maine is evidently not denuded of its timber, or is securing the benefit of a reafforesting, The Maine *Journal* says that something like 110,000,000 feet of logs had been cut and will be floated down the Kenebec River the ensuing summer.

THE Muskegon correspondent of the *Northwestern Lumberman* says:—On the headwaters of this stream these is plenty of snow and good hauling, while nearer the mouth of the river there is still plenty of snow in the woods, but as there are more clearings, consequently the roads more exposed, the hauliug is poor. Quite a number of camps have broken up, having completed their jobs. I hardly think our jobbers or operators have got in within 50,000,000 or 75,000,000 feet of last fall estimates, but, with the old logs left over, there will be all the booming company and mills can handle.

THE *Northwestern Lumberman* says:—The project is to construct a railroad from Duluth to Winnipeg, and to have it pass through the Red Lake, Minnesota, pine timber region, and the Rainy Lake mineral district. The Duluth & Winnipeg Railway Company is an organization already chartered for this purpose, and it is said that work on the line has already been begun. The Grand Forks boomers want a road to Duluth also and propose to connect with the Winnipeg line at Red Lake. A better railroad scheme could not be conceived. If Duluth could secure these two roads, besides the Vermillion Lake line, her "zeuith" aspirations might yet be realized in part.

THE hurricane of 1865 blew over numberless cocoanut trees in the Bahama Islands. Instead of dying, each prostrate tree sent up an upright shoot from the tip. Now these branches are from twenty to forty feet in height and yield abundantly.

THE London *Timber Trades Journal* says:—Perhaps spruce sellers have found affairs as bad as most. A month ago they exhibited some little amount of firmness, and if deliveries had continued active an advance might have been established. But the demand fell away, and the heavy stocks of spruce deals, which at the commencement of the year we indicated were held at the inland wharves and railway depots. have evidently told with no inconsiderable effect. It is perhaps difficult to fix the exact market value of St. John spruce deals to-day. If a really good buyer were to place himself in form for a good line, he would doubtless find sellers extremely accommodating.

SUCCESSION OF FOREST GROWTHS.

The *Lumberman's Gazette* says that Robert Douglas, the great western nurseryman, gives, in a brief letter to the *Gardener's Monthly*, some interesting facts concerning the succession of forest growths—the result of years of observation. Where the forests are cut down and the fires are kept out, they in the main reproduce the same species. But if a settlement is formed and cattle allowed to run in the cut down woods, the seedlings are destroyed as they appear. In a burned forest everything is changed, all vegetation is swept away. Even the soil is changed, and its surface, if thin, is destroyed.

After a forest fire, the first tree that makes its appearance is the aspen (*Populus tremuloides*), a tree which naturally grows on moist lands, where its roots have the best chance to escape from the general destruction. According to Mr. Douglas, this tree predominates in burned forests in Colorado, Wyoming, Dakota, the Black Hills, Minnesota, Manitoba, Wisconsin and northern Michigan. In Wisconsin and the Black Hills it is mixed with the white birch, and occasionally, as in northeastern Wisconsin, the white birch is the chief tree. Both the trees and seeds of conifers are usually destroyed by fire, except sometimes *Pinus bandsiana* in northern Wisconsin, and *Pinus contorta* at high altitudes in the Rocky Mountains. The cones of these two pines are very hrad, and that fact may account for their preservation. Next to the aspeu and white birch, those trees and shrubs spring up over burned districts which bear seeds that are either blown to great distances, remain long in a dormant state in the ground, or are carried by birds. Where the burned forests consisted of oaks and pines adjoining, or partly intermingled, the oaks will be found after a fire crowding upon the pine lands. This is due in part to the fact that oaks renew themselves from the stumps, which pines do not, and that acorns are often burried by squirrels in spots favorable to their speedy growth.

Mr. Douglas raises a warning voice against the wanton destruction caused by forest fires, and thiuk the time has come when some method should be adopted to prevent their frequency and exteut. "Individuals like myself," he adds, "can only implore, but are powerless to prevent, such wanton recklessness; but the public press should arouse the people, the state governments or the national legislature to see that some plan is adopted to check this terrihle waste."

EXHAUSTING THE TURPENTINE FORESTS

Wilmington, N.C., March 30.—Those who ought to know say that it will not be very long before the turpentine orchards will consist only of dead pine trees. This is exactly in the line of the predictions of Ingalls in the Senate and S. S. Cox in the House when the Tariff bill was uuder discussion. Mr. Ingalls predicted that, at the present rate of consumptiou, it will require only seven years to exhaust the pine supply. In Wilmington the owners of turpentine stills say that within five years, as production is now averaging, the stills will indeed become very still. Already there is a marked falling off iu the production. The fearful craft that ply the Cape Fear River still bring down to port hundreds of barrels of rosin daily, but not so many as they did two years ago. Young trees that no turpentine gatherer would have thought of boxing for turpentine a few years ago are now drained for their valuable juice. It will not be long before a very serious scarcity will occur, unless something is done to protect the young growth.

A new danger to the pines arises from a very recent discovery of the possihilities of rosin. No longer will it be made the hutt of jokes respecting it use for fiddles and lager beer barrels, for it has been proved that it can be made to yield a very rich lubricating oil. It is cheaper than linseed, and combined with that oil, it is said, it makes the best lubricator in the market. Experiments are being constantly made, and now it is refined into three grades, the third yielding a drab-colored oil that is beginning to win high favor in the market. The lowest grade is sold to a Philadelphia firm that, by a secret process, converts it into the best axle grease. This development of the value of rosin is comparatively recent and is meeting with such success that it stimulates the production of turpentine and rosin to the great danger of a speedy exhaustion of the supply. There is a chance for a fortune in connection with this production of rosin oil. The man who can discover a process of deodorizing it may, if he can keep his process secret or patent the machinery, retire from business in a short time with all he wants to live on. The attempt has been made. A New York chemist set up his pots and kettles about a year ago in one of the yards adjoining a large still in this city, and fussed for a week with chemicals, making vile smells and viler smoke, but he failed and retired disgusted. If the oil can be deodorized it can be brought into common household use.

The immense tracts of land where once stood turpentine orchards, now exhausted, are not allowed to go to waste hereabouts. It has been found that this land produces a better rice than that of the South Carolina lowlands, and at the present rate of production it will not be long before North Carolina becomes the great rice-producing State of the Union. Something, however, will have to be done by the Legislature of the State, as was done in Maine, to save the forests, or before long its surface will be denuded of pine.

WHITE PINE AS A FOREST TREE.

BY JACOB W. MANNING, READING, MASS.

Our native white pine (*pinus strobus*), which was introduced into England by Lord Weymouth in 1702, and is there called the Weymouth Pine, extends to the 50th degree north latitude, west to Lake Winnipeg, south from Minnesota to the New England coast and along the Alleghanies to Northern Georgia.

It is one of the most profitable of all the pine family as fuel or as a timber tree. A piece as long as a stave for a pail, that can be cut from between the knots measuring a year's growth, is valuable, as well as the longest clear board plank or framing timber. It is always reliable, does not warp or crack as spruce or hemlock, and is light and durable as a building material.

Many open lands and forests abound in trees that will transplant safely, if six to twenty-four-inch trees, and even larger, are taken up with a ball of earth, which should be retained when the trees are planted, thus allowing the roots to be undisturbed; and I find after ample experience, if the holes are opened in the fall and allowed to remain open over winter, especially in hard land that is not to be cultivated, the frost will mellow the earth and put it in much better condition for the growth of trees when plauted the next spring.

On rough land, where stumps and rocks abouud, the distauce apart would be regulated by the lay of the land; they should be planted from three to seven feet apart. It is best to keep all cattle from a young forest.

This work could be done as the ordinary farm work with the usual force of men.

Thus many broken lots of laud now treeless aud so rocky and worn out that they would uot afford a payiug crop of rye or even buckwheat, and when used as a pasture would not pay the interest of $500 per acre for any number of years, could be made to increase in value year after year, with a small outlay at first and little

care after, so that it would be an investment from which a young man would realize a great gain, and no better legacy could be left by an old man to his sons; or if he wished to realize on it he could sell it at a much advanced price over the original value of the land and the labor put on it in planting the trees.

The growth of a pine in good soil in ten years after transplanting is ten to twenty feet in height, with a spread of branches six to fifteen feet, and a diameter of three to eight inches where they stand alone.

Allowing trees to grow in an open situation, with a wide spread of branches from the base up, gives the tree great vital force but makes knotty lumber; but in growing timber it is most desirable if free from knots, and this must be attained by close planting.

I have seen white pine come up from seed in an old worn-out pasture, full of rocks and running briars, that grew in forty to forty-two years to more than two feet in diameter, affording two ample board-logs and a heavy horse load of fuel, and all about it was a little forest of seedlings that required thinning out or transplanting, and all this from one seed that must have been carried many rods by the wind forty years before. Now these suggestions will apply to many almost useless pieces of land on which our New England farmers are paying taxes, but receiving no corresponding income. But on many pieces of barren plain land too poor to grow crops, but on which trees can be grown and cultivated, tree growing can be made more profitable if carried on systematically. The land should be thoroughly ploughed, the trees planted four feet apart each way, the cultivator run about four times a year until the trees shade the ground sufficiently to keep the weeds down. Wherever plantings are made the trees should be thinned often enough to allow their full development.

In all parts of New England, by taking away or planting the trees indigenous to the several sections, great changes are made in the landscape. This change is in the hands of landowners, and all should have an eye to effect some improvement in their day.

Little is said about aid from Government to renew the forest growth, although it is a giant task, but there is talk and even delay in tree-planting, in hope of aid and bounties or reduction of taxes to encourage it, also hesitation about what trees to plant. We say what grows well and sells well is safe to plant more of.

The most successful and praiseworthy of street, shelter belt or forest plantings that have been made, and, I might say, ever will be made, were by individual effort and purpose, and single-handed labor of one man here and there often in a very obscure way.

This work is greatly to be praised, and if any outside encouragement can assist to plant a few thousand acres with millions of trees each year, it will help to make more extended plantings appear easier to accomplish.—*Canadian Horticulturist.*

TIMBER CULTURE.

Minnesota legislators have "caught on" to the importance of timber culture, and have passed two bills looking toward its encouragement. One provides that every person who shall plant prairie land with any kind of forest trees, except black locust, and keep them in a thrifty, growing condition for a period of six years, shall receive three dollars per year for each acre of grove so planted. Persons planting forest trees along the public highway will be paid two dollars annually for each half mile so planted. Not less than 2,700 trees to the acre must be planted, of which at least 1,800 must be maintained in healthy, growing condition during the first two years after planting, and at least 900 must survive the whole period of six years. Trees along the highway must be planted not more than eight feet apart, and maintained in a healthy, growing condition for four years. Planting cuttings or sowing tree seeds is construed to be included in this act, but no person will receive compensation for the year in which such planting or sowing is done. This act does not apply to railroad companies planting trees within two hundred feet of their track, nor to persons acquiring land under the provisions of the act of Congress to encourage timber cultivation on the western prairies. The second act appropriates $5,000 to be paid to the Minnesota State Forestry Association to be by them expended in the promotion and encouragement of tree planting in Minnesota, by means of printing and distributing a manual of directions for planting and cultivating forests, procuring lectures and addresses on the subjects by persons skilled in that science, and disseminating the same through the public press; collecting information on the best methods of forest culture from persons in this state who have been successful in the same; by experimental cultivation of varieties of forest trees which are supposed to be adapted to this climate, or by procuring and distributing seeds and cuttings for the same, and generally to aid and encourage tree planting by any other means which they may think advisable. A portion of the money may be expended in measures for the protection of the forests already growing in the state, by publishing information as to the best manner of preventing forest fires, and otherwise protecting them, with directions for their proper thinning, replanting, etc., so as to produce systematic care of the woodlands of the state and their profitable use.—*Lumber World.*

LAKEFIELD, ONT.

Messrs. R. & G. Strickland have purchased from Messrs. Thompson Smith & Son their limits in the Townships of Ridont and Sherbourne. The timber and logs from these limits will come to Lakefield, their waters being tributary to the Otonabee River. These limits added to those previously in the possession of the firm will afford a supply to the Lakefield mills for many years to come. Messrs. Strickland have also purchased from Messrs. T. Smith & Son their large steam saw mill at Bradford, at which they purpose cutting the logs from the limits in Oakley and Hindon, which they purchased from the Dominion Bank the year before last, and on which they estimate that they have over 100,000,000 feet of lumber. This estimate does not include the Northwest quarter of Oakley, which Messrs. Strickland lately sold to Messrs. Thomson & Baker, of Hamilton, for $30,000, on which it is estimated that there is about 30,000,000 feet of lumber, but which the firm sold on account of its not being tributary to the waters in connection with their mills.

The capacity of the Bradford mill is 100,000 feet in twelve hours, and being situated on the Northern Railway, about forty miles from Toronto, it will find a ready market there, not only for the lumber, but also for the slabs and other mill refuse for fuel. It is possible that the Midland Railway may see the advantage of making an extension from Atherly to Black River, so as to put themselves in a position to carry the lumber of the extensive limits in the district. If this were done, Messrs. Strickland would remove the mill from Bradford to the Black River.

EXPERIMENTS made with cypress and walnut, and cypress and cedar, all prove that they will rot each other while joined together, but, on separation, the rot will cease, and the timbers remain perfectly sound for a long period.

THE Saginaw Bay and Northwestern logging road, recently purchased by the Michigan Central, says the Au Sable *News*, is hauling logs vigorously, and there is already banked on Saginaw Bay some 15,000,000 feet. This banking ground is said to be the largest one in the world. This road was acquired for business, and spur tracks will be put in from time to time, as may be necessary to reach timber tracts. This road, it is estimated, taps 1,000,000,000 feet of pine timber.

A KINGSTON correspondent says:—It is the intention of Mr. Fraser, of Almonte, to erect the largest mill in this section of the country at Cameron's Bay, Calabogie Lake. Mr. Mackie, of Ottawa, will also build a mill at Round Lake, which is about three miles from Gildersleeve's Rest on the Kingston and Pembroke. These mills will be ready to run by next spring. The amount of timber that will find its way to Kingston will then be doubled. P. McLaren will bring about 100 cars of timber more to Kingston this year than he did last.

TIMBER and other Consignments, and Agencies WANTED. Highest references. Address "Kaisar" care of Messrs. Deacon & Co., 150 Leadenhall Street, London, England. 3L7

Wanted.

A GOOD MAN to take charge of a Steam Circular Saw Mill at Deux Rivieres, as FOREMAN. Must have a thorough knowledge of timber and machinery. Apply to

A. & P. WHITE,
Pembroke, Ont.
2L7

FOR SALE
A Railroad Tie Saw & Carriage
(COMPLETE).

A HORIZONTAL ENGINE, 11x14 in., Fly Wheel 7 ft. Diameter, Band Wheel 4 ft. Diameter, 12 in. Face, Heavy Bed and equal to new. ALSO,

A HORIZONTAL TUBULAR BOILER, 48 in. Diameter, 9 ft. long, with 96 2-in. Tubes, Fire Front, Back Door and Frame, Grate Bars and 40 ft. of Smoke Stack 22 in. Diameter.

CENTRAL IRON WORKS,
4L7 PETERBOROUGH, ONT.

SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞Canada Pacific Railway now running through part of the property.

For full particulars address:—

WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

PUBLIC NOTICE

TRADE MARKS.

Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

And Beam Engine Marks.

It having come to the knowledge of Messrs. Thomas Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.

Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,
EAST PARADE,
SHEFFIELD, ENGLAND,
Solicitors to the said 6L3

THOMAS JOWITT & SONS

Wanted to Purchase.

LARGE QUANTITIES OF
CLEAN
SPRUCE and PINE

One foot Long and upwards; three inches thick; three to seven inches wide.

S. J. MORELAND,
LUMBER IMPORTER,
And Manufacturer of all kinds of Safety Paraffin and Vesuvian Matches.
GLOUCESTER, ENG.
February 20th, 1883. 3L6

VALUABLE
Timber Limits
And MILLS
FOR SALE,

CONSISTING OF:

About 300 miles of limits in the Counties of Joliette and Montcalm, in the Province of Quebec, well wooded with spruce, pine, cedar, and traversed by the La Quarreau, Dufresne, and other rivers.

About 25 acres of land (freehold) with a splendid water power and saw mill, store, dwelling house and outbuildings, on the La Quarreau River, at Montcalm, about 40 miles from Montreal.

About 100 acres of land (freehold) with a splendid Steam Saw Mill, capable of cutting 100,000 logs per annum, a large house for manager, 14 dwellings for employees, large machine shop, planing mill, bakery, store, fire engines and house, wharves, a steam tug, 3 barges, &c., &c., at Charlemagne at the mouth of the L'Assomption River, about 17 miles from Montreal.

Also, booms and dams on La Quarreau, Dufresen, L'Assomption, and other rivers.

Three vessels drawing 6 to 8 feet of water can load at the wharves at once, and ships, drawing 25 feet, can anchor with ¾ of a mile from the wharves, and load from barges.

The whole is complete and in running order for carrying on a large and profitable lumber business, and will be sold at a low price and on favorable terms.

For particulars apply to THE EXCHANGE BANK, Montreal, or to

JOHN M. M. DUFF,
Public Accountant,
3L8 113 St. James Street, Montreal.

VALUABLE
TIMBER LIMITS
FOR SALE,
Situated in the Nipissing District.

The following very desirable limits will be offered for sale at Public Auction (if not previously disposed of) at the

Grand Union Hotel, Ottawa, Ont.
—ON—
TUESDAY, 24th Day of April, 1883,
At 2.30 O'CLOCK IN THE AFTERNOON.

Berth No. 23, Nipissing.....36 square miles
do 43, Georgian Bay.....36 do
do 51, do .....36 do

BERTH 23 is heavily timbered and is very favourably situated for lumbering. The Canadian Pacific Railway crosses the south-west corner of the limit, and parties desirous of manufacturing lumber for shipment to Manitoba and the North-West would find this an excellent opportunity for establishing such a business. There is said to be a good mill site on the berth, with good facilities for piling and for shipping either west or east.

BERTHS 43 and 51 are adjacent limits, conveniently located for getting logs into Georgian Bay.

The terms and conditions of sale will be made known at the time of sale.

Further particulars may be had on application to Mr. W. H. Rowley, Manager of the Merchants' Bank of Canada, at Ottawa, Mr. Wm. Cooke, Manager at Toronto, or to

R. C. W. MacCuaig,
Auctioneer, Ottawa.
February, 28th, 1883. 3L6

MONTREAL TRADE.

As the season advances, the prospects of our lumber interests are brightening, there being now good reason for believing that the demand from the United States will be large during the approaching season, heavy building contracts having been given in New York and Boston, where large quantities of Canadian lumber are used. Enquiries from American buyers already indicate that they will need large supplies of Canadian pine, and we hear that one mill has made contracts for future delivery at very good prices, which show an advance upon several different grades. It was at one time thought that the make of lumber would be enormously heavy in the States, and thus produce an over-supply. This, however, has been obviated by the agreement just entered into between the large lumber firms in the West having their head-quarters in Chicago, whereby the make of the present season, instead of being increased as was expected, will be reduced 25 per cent. below that of last year. This, it is said, will cause more demand for the Canadian product, and the recent increase of inquiry lends credence to that opinion. There has been a considerable further advance in the price of laths, sales having been reported at $2.50 per 1,000, one party refusing to sell under $3. Last summer they sold at $1.35. In hard woods, ash is very scarce and prices are firm. There is an increasing demand for cherry, both from the States and the local trade, as this kind of wood is beginning to be used more freely and is taking the place of walnut. In other descriptions there is not much change. As regards the export trade in deals to the United Kingdom, and in lumber to South American ports, it is as yet too early to form an opinion, although some in the trade think that vessels will be as glad to take deals and lumber as they were last year.—*Gazette.*

WINNIPEG.

The Winnipeg *Commercial* says:—That lumber will be considerably reduced in price this year there cannot be any doubt. The enormous production, both in Canada and the States, will necessarily cause a reduction in prices. In the Lake Winnipeg and Lake of the Woods districts the output will be very large, much in excess of that of any previous year, and the abundant supply will tend to bring with it the drop in prices we have already spoken of.

Wood will be also plentiful, and there need not be any fear of a scarcity in that direction. One firm alone has 20,000 cords to bring into the city, and this is supplemented by large lots from other sources. This industry which is of vast importance to the city has been well looked after, and, so far as circumstances can be judged, there will be a good supply.

A CHICAGO LUMBER ASSOCIATION.

Considerable comment, some favorable, some decidedly the reverse, has been caused by the formation of the Northwestern Lumber Manufacturers' Association, whose object is to strengthen the wholesale lumber market. A meeting of the manufacturers was called at Chicago, March 8, and was attended by representatives from nearly every prominent manufacturing point between Lake Huron and the Upper Mississippi, except the Saginaw valley. It was the unanimous opinion of those present that an orginization of manufacturers was desirable. It was further agreed that the cut of the coming season should be reduced to some extent, but how much and the means of securing the reduction were not so easily decided. A committee of nine was appointed to harmonize varying plans and prepare a scheme for permanent orgaization. This committee, in the afternoon, reported as follows:—

Your committee, considering the fact that there is a prospect of an overproduction of lumber for 1883, and that to prevent such an overproduction a system of curtailment is necessary, recommend as follows: 1. The committee recommends a reduction upon the actual total production of lumber for 1882 of 15 per cent. 2. That any mills on or tributary to Lakes Michigan, Huron or Superior start up on May 1. 3. That, as far as possible, no mills on the Mississippi or its tributaries start up before May 1. 4. That the lumber manufacturers organize into an association, with powers to secure the carrying out of the above recommendations.

This report was adopted, and the convention further proceeded to the adoption of a constitution and by laws. It was, however, stipulated that these should not become binding until signed by firms representing the manufacture of 4,000,000,000 feet of lumber last year. The board of directors, to consist of fifteen persons, were empowered to regulate the production of lumber in any season subject to the will of the members as expressed at the annual meetings to be held in the month of September. It is estimated that the delegates present represented a production of fully 3,000,000,000 feet, and it is thought that the requisite 4,000,000,000 feet, to render the action of the association binding will be secured. In conclusion it should be said that the organizers of this association expressly disclaim any intention of "booming" lumber prices. They think that white pine lumber is now selling at no more than legitimate value and all they desire is to prevent the market from being depressed by over-production, so that lumber shall not bring its real value.—*Lumber World.*

NORTH WEST TIMBER.

We extract the following from the annual official report of the Minister of the Interior:

DEPARTMENT OF THE INTERIOR,
TIMBER, MINERAL, AND GRAZING LANDS OFFICE,
OTTAWA, 31st December, 1882.

SIR,—I have the honor to submit the third Annual Report of the Timber, Mineral and Grazing Lands Office of the Department of the Interior.

A statement showing the revenue derived from Crown Timber, Mineral, and Grazing Lands for the departmental year ending 31st October last, is appended hereto, together with the report of the Crown Timber Agent at Winnipeg.

Returns from saw mills show the following quantities of building material as having been manufactured during the year:—

	Feet B. M.
Sawn lumber	26,673,267
Shingles	6,450,311
Lath	2,251,100

New mills being operated by the undermentioned firms commenced sawing during the season:—

Messrs. Drake & Rutherford, Fisher River, Manitoba.

Messrs. Shields, Haggart & McLaren, Shell River, Manitoba.

The Morton Dairy Farming Company, Turtle Mountain, Manitoba.

Mr. W. Stubbs, Ebb and Flow Lake, Manitoba.

Messrs. Lethbridge & Co., Beaver Creek, Porcupine Hills, Alberta.

Mills are being operated by the following firms west of the Third Initial Meridian:—

Messrs. McKay (Stobart, Eden, & Co.,) Prince Albert, Saskatchewan.

Messrs. Moore & Macdowoll, Prince Albert, Saskatchewan.

The Hudson's Bay Company, Edmonton, Athabasca.

Messrs. Hardisty & Fraser, Edmonton, Athabasca.

Messrs. Lethbridge & Co., Beaver Creek, Alberta.

The Cochrane Ranche Company, Fort Calgary, Alberta.

Mr. P. McLaren, Pincher Creek, Alberta.

The St. Albert Mission, St. Albert, Athabasca.

The following is a statement of correspondence, applications received, and returns examined:—

Number of letters received	3,579
" letters sent	3,109
" timber limits applied for	684
" mineral locations applied for	746
" mill sites applied for	11
" applications for grazing lands	154
" returns from mills received and checked	113
" licenses for timber limits drawn	25
" returns of permits received and examined	43
" instructions issued for survey of timber limits	34
" returns of surveys of timber limits received and examined	8
" leases for coal locations drawn	7
" " grazing lands "	39

I have the honor to be, Sir,
Your obedient servant,
G. U. RYLEY.

The Deputy of the Minister of the Interior,
Ottawa.

Statement of Receipts on account of timber, for the twelve months ending 31st October, 1882:

Month.	*Timber.* $ cts.
1881.	
November	3,673 79
December	5,109 31
1882	
January	3,400 67
February	7,795 20
March	2,993 91
April	537 58
May	12,660 61
June	604 42
July	8,963 47
August	5,094 78
September	10,312 13
October	14,635 39
Canadian Pacific Railway account (settled at Head Office	36,000 00
	111,781 26

CROWN TIMBER OFFICE,
WINNIPEG, 31st October, 1882.

SIR,—I have the honor to submit the following report of the work of the Crown Timber Office, Winnipeg, for the year just closed.

Statements showing the revenue derived from Crown timber, the number of saw mills operating under Government license in the Province of Manitoba, Keewatin, and the North-West Territories, as far west as the Third Initial Meridian, with the quantities of building material manufactured and sold by each lessee, respectively, during the year, and other information regarding the business of this office, will be found hereto appendod.

It will be observed that many of the saw mills shown in the report of last year are not included in the schedule I attach, owing to the fact that some manufacture exclusively logs imported from the United States, while others are small portable mills brought in to cut timber from lands no longer in possession of the Crown; also, that the saw mills shown as situate in the North-West Territories west of the Third Initial Meridian are now outside my Agency, being included in the Saskatchewan District, under the charge of Mr. Thomas Anderson, at Edmonton.

An examination of the returns from saw mills shows the following quantities of building material as having been manufactured during the year:—

	Feet B. M.
Sawn lumber	25,465,871
Shingles	6,442,182
Laths	2,251,100

showing a large increase over the returns of last year.

The following statement shows the amount of correspondence, number of permits issued, number of seizures made, and number of mill returns received and checked:—

Number of letters written	1,766
" " received	1,392
" permits issued	580
" seizures made	85
" mill returns received	121

The following changes in the ownership of timber limits have been made during the year:

Mr. Joseph Whitehead assigned to Mr. David Ross.

Mr. Robert McIntosh assigned to Mr. J. W. Douglas.

Mossrs. Roberts & Whimster assigned to Messrs. Whimster & Kayll.

Mr. Donald Gunn assigned to Mr. E. P. Leacock.

Messrs. Cumming & Co. assigned to Mr. James Kent.

Mr. W. J. Macauly assigned to Messrs. Dick & Banning.

Mr. S. H. Fowler assigned to The Rainy Lake Lumber Company.

Leases of limits to the following parties were cancelled, viz.: Mr. John McBeth and Mr. R. Z. Rogers.

The total cash receipts forwarded by Deposit Receipt in favor of the Hon. the Receiver General amount to $61,369.16.

The total revenue derived from timber, including $36,000 from the Canadian Pacific Railway Company for construction timber, the account for which was adjusted at the head office, amounted to about $97,639.16. Compared with the previous year, the increase in revenue is $53,134.99.

The expenses incurred in working this office amounted to $1,871.43, which, compared with those of the previous year, show a decrease of $709.43.

Since my appointment as agent I have conducted the business of this office with the assistance of one temporary clerk.

Statement of Receipts on account of Crown Timber, for the twelve months ending the 31st October, 1882.

Month.	*Returns under Lease.* $ cts.	*Bonus and Ground Rent.* $ cts.	*Permits.* $ cts.	*Dues and Fines for Trespass.* $ cts.	*School Lands.* $ cts.	*Total.* $ cts.
1881.						
November	1,041 98					
December	818 17	890 00	1,072 70	1,276 27		3,390 95
1882.			2,456 05	66 55		4,170 77
January	1,612 00		1,908 70	320 85		3,841 61
February	335 41		831 15	168 80		1,335 36
March	976 41	615 62	686 24	81 10	68 50	2,427 24
April	214 25		199 33	124 00		537 58
May	1,182 00	1,126 25	7,025 41	1,203 53	48 01	10,645 20
June						
July	4,400 13	1,107 50	2,015 22	1,377 02	3 00	8,903 47
August	2,678 65	130 00	821 05	330 95		3,990 65
September	2,440 55	452 00	804 80	3,757 50		7,454 85
October	10,746 54	315 50	3,350 35	217 00	119 51	14,035 89
Pacific Railway Company's account, settled at Head Office	26,505 61	4,576 87	21,177 00	8,990 17	119 51	61,369 16
Grand Total						97,369 00

E. F. STEPHENSON,
Crown Timber Agent.

CROWN TIMBER OFFICE,
WINNIPEG, 31st October, 1882.

GIRDLED TREES.

Usually a girdled tree soon dies; but it would appear from the following statements of Mr. W. H. Ragan, of Clayton, Ind., that such is not always the case:—"Hon. F. Beeler, General Superintendent of the Indiana State Board of Agriculture, living four miles southwest of Indianapolis, has a Scotch pine tree from which the bark has been removed for a space of almost a foot, when about three inches in diameter. At this point the wood is as dry and lifeless as a table leg, but above, the top is healthy, making regular and thrifty annual growths, bearing and perfecting seed, and to all visible appearance as healthy as though nothing unusual was the matter with the tree. This condition has existed for years, and the growth above the girdled point has increased to more than three below. This tree was girdled by the sapsuckers. The other is a tree of the same variety on the farm of Allen Miles, two miles east of Belleville, in Hendricks County, Ind., which was completely strangled by an iron ring, two and a half inches in diameter, being dropped over it some years ago. Below the ring for several inches the wood is dead and dry as though it had been in a dry kiln for years; above it is greatly enlarged, perhaps quadrupled in size, and still alive, though declining."—*Lumber World.*

THE *Northwestern Lumberman* says:—Some of the prominent yellow pine manufacturers have been considering for some time the propriety of making a move in the direction of a reduction of cut. They recognize the same fact that is acknowledged in the Northwest, that there is an overproduction of lumber, and believe that a healthier trade would result if there was less lumber to go on the markets. But how to decrease the speed of the mills is a problem which not one of the favorers of the scheme has satisfactorily settled, even in his mind. To bring into a combination all the men owning and operating mills in the South, would be impossible, so long as many of them have no money ahead, and doubtless it would be impossible if they were all financially independent.

Chips.

SIX million feet of lumber are said to be consumed annually in the toy manufacture of the United States.

ON the Pigeon river, in Haywood County, there is a comfortable country church built of the lumber from a single poplar tree.

THE Phœnix Furniture Company, of Grand Rapids, Mich., recently received 50,000 feet of mahogany from the Sandwich Islands.

ARRANGEMENTS are being made for the shipment of a large amount of Canadian lumber through Duluth to Winnipeg the coming season.

THE council at South Grimsby has taken advantage of the new act for the encouragement of tree planting, and in a few years the highways and byways of that township will be as shady as the forest, and summer travellers will bless the wise men of the council.

THE Roscommon Lumber Company, of Roscommon, Mich., now has eight miles of logging railroad, besides branches and sidings, and runs ten log trains daily, of 2,000 feet each, which makes an average of 200,000 feet daily that the company is putting in Houghton Lake.

THE *Northwestern Lumberman* says that a Georgian Bay lumberman is negotiating with the St. Paul & Duluth road for the shipment of 25,000,000 feet of lumber via Duluth to Winnipeg, Manitoba. He intimates that this is only a drop in the bucket compared with what is to come.

THE Morris correspondent of the Winnipeg *Commercial* says that Messrs. Aitchison & Reilly, of Winnipeg, formerly of Ontario, are talking about starting a planing mill at Morris. This is something very much needed, and we hope the gentlemen named will complete arrangements.

THE Keewatin correspondent of the Winnipeg *Commercial* says :—Lumber is being shipped from here to Winnipeg and westward at the rate of seven cars daily. Messrs. Dick, Banning & Co.' yard is almost empty, but the Keewatin Lumber Company appear still to have a good stock on hand.

The London *Timber Trades Journal* says :—We understand that upwards of 12,000 standards of the BS1stSC Bjorneborg make, for delivery during the season, have already been placed by the agents of the stock, Messrs. Scheydt & Gallatly, in England, Scotland and France, at very favourable prices.

THE Grand Haven Lumber Company's new shingle mill, which has a capacity of one million feet per day, employs two hundred men and boys, and is claimed to be the largest shingle mill in the world, is completed, and steamed up March 15 for trial. It will commence running as soon as spring opens.

THE Boston Lamina Wood Company, Boston, Mass., are making tea and grocers' scoops upon a new and interesting plan. They are made of three-ply wood, the middle stratum or layer being placed with the grain of the wood running at right angles to that of the two outer layers. They are finished with two heavy coats of orange shellac. These scoops will not curl up, like tin, when striking a nail, and they are free from rust.

THERE are several reasons why walnut lumber will probably decline in the future, but the greatest reason is that while the production has been facilitated by almost every conceivable means, including extensive additions for cutting and transporting, the erection of new mills and tramways, piercing hitherto inaccessible regions in quest of it, the demand is likely to perceptibly decrease, owing to the fact that fashion has decreed that walnut is for a period at least superseded.

THE Trenton *Courrier* says :—Gilmour's mills are waiting for a move in the ice, to commence operations night and day, with a double gang of men. A new engine and six new boilers have been built to drive the shingle mill. It is reported that Mr. Gilmour has relet the building of a dam across the river at an advance of 25 per cent. to Mr. Dinwoody of Campbellford. The intention is to erect a sash, door, blind and moulding factory on the dam. The subject of a bonus for the building of the dam will likely be discussed at the next regular sitting of the Town Council.

A LUMBER KING.

The Kingston *Whig* says :—Last evening a *Whig* reporter met the burly form of Mr. Peter McLaren, probably the greatest lumberman in Canada. He has been most prominently before the public for some time through his celebrated dispute with Boyd Caldwell concerning the use of the Mississippi River. The case having gone through the Canadian courts will now be laid for final decision before the Privy Council. We had thought Mr. McLaren was a a Scotchman, but that idea he dissipated. In answer to a question he said he was a native of Ontario, born in Lanark and residing in that section of the country all his life. His father was one of first lumbermen in the district, there he lost all his wealth. He died when his son was 12 years of age.

About 20 years ago the subject of this sketch began lumbering on the Mississippi. He has thrived wonderfully, and can now probably count his wealth by hundreds of thousands. He is a genial man and has many friends in this city, which he visits frequently. Of course, lumbering is his great theme in conversation, and the reporter learned that the past winter had been a remakably good one for operations in the woods. The snow has been so well distributed that there is very little trouble in moving about the timber limits. The ice has also been firm, and now on all the tributaries of the Mississippi there is piled the product of the winter's work.

The chief streams in Mr. McLaren's limits are South, Molloy, Bear and Louse Creeks. The shantymen are working in the townships of Clarendon, Palmerston, Barrie, Olden and Abinger and as many as 230 teams have been employed. The remuneration per day is $1.50 and findings for man and beast. About 350 men have been at work, and they have drawn salaries ranging from $18 to $45 per month inclusive of board. The supplies in quantity are simply enormous and are despatched almost daily from Kingston in cars, or by teams from Perth and Carleton Place. The pork, beans and bread consumed by the men whose appetites have been sharpened by the keen air and muscular exercise is astonishing. The food devoured in one day in the shanties would afford a meal for nearly the whole population of Kingston.

The cut this year will be about 80,000,000 feet of lumber and 8,000 pieces of square timber. The lumber wtll be sawn at Mississippi Station on the Kingston & Pembroke Railroad, and at Carleton Place, where Mr. McLaren has two fine mills. The square timber will be brought to Kingston by train, rafted and sent by tows down the river. The expense is cheaper by this route than that by which timber was sent to Quebec some years ago. Palmerston, on the Kingston & Pembroke Railroad, is the chief distributing depot of Mr. McLaren.

THE *Call* notes the sale of property on Lake Superior. The sale was by a Canadian firm, who had built the mill, running two circulars with lath and edging works, shingle mill and all auxiliary modern devices, who had built also a store and fine boarding house, and who owned a tug and lighters and all requisite facilities for carrying on the business ; of 50,000 acres of pine land, all the land on Whiskey bay, so-called, a little distance above Sault St. Marie, giving boomage facilities for 200,000,000 feet of logs ; timber estimated at 250,000,000 feet, of which 11,000,000 will be got in this season and sawed before the close of 1883. The parties purchasing are Louis A. Hall and A. A. Buel, of New York, consideration not stated. The timber is of good quality, the river which comes in at the bay is navigable for 30 miles from its mouth ; every facility is at hand for carrying on the business of lumbering in its most comfortable and advantageous methods.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills
L7tf

Established 1874.

Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELEIVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

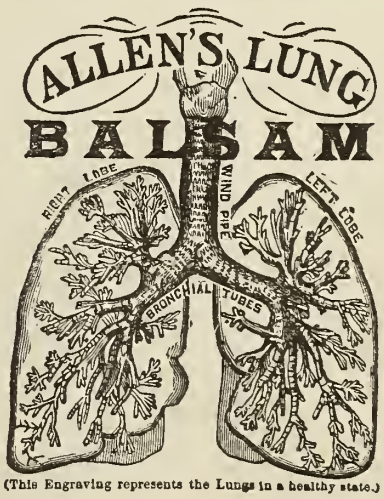
Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1yl7



(This Engraving represents the Lungs in a healthy state.)

THE WAY IT WILL AFFECT YOU.

It excites expectoration and causes the lungs to throw off the phlegm or mucous; *changes the secretions and purifies the blood;* heals the irritated parts; gives strength to the digestive organs; brings the liver to its proper action, and imparts strength to the whole system. SUCH IS THE IMMEDIATE AND SATISFACTORY EFFECT that *it is warranted to break up the most distressing cough in a few hours time*, if not of too long standing *It is warranted* TO GIVE ENTIRE SATISFACTION, EVEN IN THE *most confirmed cases of Consumption! It is warranted not* to produce costiveness (which is the case with most remedies), or affect the head, as it contains no opium in any form. *It is warranted to be perfectly harmless* to the most delicate child, although it is an active and powerful remedy for restoring the system. *There is no real necessity for so many deaths by Consumption*, when ALLEN'S LUNG BALSAM will prevent it if only taken in time. Physicians having consumptive patients, and who, having failed to cure them with their own medicine, we would recommend to give ALLEN'S LUNG BALSAM a trial. *Sold by all Druggists.*

PERRY DAVIS' VEGETABLE PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

Market Reports.

TORONTO.

From Our Own Correspondent.

APRIL 9.—There are complaints just now on the part of the retail dealers for the want of sufficient trade to keep their staff of men and horses employed, but on investigation I find that this dulness is not common to all the yards, some dealers avowing that they have all they can do to supply orders as fast as wanted. I think an explanation of this difference may be found in the fact that new streets through properties not hitherto placed on the market, are being opened from time to time in various parts of the city, and a building spurt takes place first in one locality and then in another, and often some miles apart from each other, and it is quite natural that those dealers having the yards nearest to the locality being built upon should enjoy a monopoly of the trade for the time being, although this is not always the case as some dealers whose yards are far remote from the scene of operations, will cut on prices, and deliver a bill for a less sum than others close at hand. In some instances I have known quotations for bills ranging in value to say $500, on which quotations by different dealers varied one tenth of the entire sum, and this, I presume, will continue to be the case until such times as dealers have the good sense to unite and decide on a scale of prices from time to time as the state of the lumber market may warrant them. There is really no valid reason why dealers should vary five dollars on a bill of moderate dimensions, the class of timber to be supplied being equal.

The stocks at all the yards are fully up to the mark as to the quantity usual at this season of the year, and, with the exceptions noted above, prices remain at same quotations as formerly furnished you. The main questions now agitating the mind of shippers and mill men, are, when will navigation commence, and how will trade open up with our cousins over the way? With regard to the former question we may safely assume that nothing will move from our wharves here of any consequence before the 1st of May, and in regard to the latter, opinions are extremely conflicting, but the writer's ideas have not altered, and the views expressed in former letters, will, I think, be found to hold good, and at the close of the season it will be found that we will not have any surplus stocks left on hand above that usually held, and that fair prices will rule on the market during the entire season.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@45 00

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ⅌ M	3 00
Sawn Lath	3 00

CHICAGO.

The *Northwestern Lumberman* of April 7th, says:—The salient features of the lumber trade at the moment are these: Considerable activity at Saginaw, at apparently firm prices, fully as high as they were last year at this date; a heavy movement from all the markets west of Lake Michigan, at prices prevalent all winter; nothing noteworthy on the east shoro of Lake Michigan, but an active demand at railroad points in the interior of the state, and rapid shipment therefrom; an increasing trade in New England; the opening of the Hudson, and a forward movement of lumber-laden barges at Albany for New York and vicinity; a revival of demand at Oswego for rail shipment, and a general postponement of navigation on the lakes on account of the ice-bound condition of coast-line and harbors.

In reference to the coming season's supply of logs, it may be generally said that there are plenty of them, and in Michigan they are selling at good figures, as high as $18 having been realized in one transaction at least.

Receipts, and stock on hand of lumber, shingles, etc., for the week ending April 5, as reported by the Lumberman's Exchange:

RECEIPTS.

	Lumber.	Shingles
1883	2,191,000	753,000
1882	39,027,000	26,912,000

FROM JANUARY 1, 1883, TO APRIL 5, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	31,254,000	22,257,000
1882	108,251,000	42,548,000
Inc		
Dec	76,997,000	20,291,000

STOCK ON HAND MARCH. 1.

	1883.	1882.	1881.
Lumber	546,411,311	378,558,184	398,800,030
Shingles	238,643,350	162,302,900	166,010,000
Lath	54,139,448	33,426,283	41,784,270
Pickets	2,746,626	2,354,511	2,251,438
Cedar posts	153,278	112,608	177,304

OSWEGO, N. Y.

From Our Own Correspondent.

There are no changes from last quotations:—

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ⅌ M	$57 00@64 00
Pine, fourths	53 00@57 00
Pine, selects	48 00@52 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ⅌ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ⅌ M	40 00@43 00
Ash, second quality, ⅌ M	25 00@30 00
Cherry, good, ⅌ M	60 00@85 00
Cherry, common, ⅌ M	25 00@35 00
Oak, good, ⅌ M	40 00@43 00
Oak, second quality, ⅌ M	20 00@25 00
Basswood, ⅌ M	25 00@30 00
Hickory, ⅌ M	40 00@40 00
Maple, Canada, ⅌ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ⅌ M	35 00@40 00
Shingles, shaved, pine, ⅌ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ⅌ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

BOSTON.

Cotton, Wool and Iron of April 7, says:—The tone of the market continues firm, with a good demand for the season ou general lines. Operations in some suburban places are rather backward on account of weather and snow, but the prospect for future operations is quite encouraging.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

GLASGOW.

The *Timber Trades Journal* of March 24, says:—The imports of wood to Clyde during the past week include a small cargo of pitch pine arrived at Greenock, and one of mahogany at Glasgow, also parcels of walnut and staves, &c.

There has been two auction sales held, particulars of are noted below. The Greenock sale attracted a large company, rates steady, and a good business done.

AUCTION SALES.

On 15th inst., at Glasgow, Messrs. Singleton, Dunn, & Co., brokers:—

		per cub. ft.
Quebec 1st yellow pine deals—		
11 ft	12/25×3	3s 1d.
11 & 12 ft	7/10×3	2s 6d.
Quebec 3rd yellow pine deals—		
16 ft	11×3	1s 1¾d.
10 to 16 ft	11×3	1s 1½d.
10 " 13 "	10×3	1s 0½d.
10 " 13 "	9×3	1s 1d.
10 " 13 "	7/8×3	11¾d.
Saguenay 3rd yellow pine deal ends—		
8 ft	7/11×3	10¾d.
4 & 5 ft.	7/0×3	9¾d.
St. John, N. B., spruce deals—		
20 ft	0×3	11½d.
Quebec 2nd spruce deals—		
13 to 16 ft	11×3	12d.
12 " 14 "	9/16×3	11½d.
12 " 16 "	9×3	11½d.
14 " 16 "	8×3	11d.
11 " 16 "	8×3	10¾d.
12 ft	7×3	10½d.
Do. 3rd spruce deals—		
13 ft	11×3	11½d.
13 "	9×3	11d.
11 "	9×3	11d.
10 "	9×3	10¾d.
14 to 16 ft	8×3	10¾d.
10 " 13 "	8×3	10½d.
12 " 16 "	6/7×3	10¼d.
Quebec oak planks—		
14 ft	12×5	2s 4d.
5 to 12½ ft	12×5	1s 11d.
5 " 8 "	10/14×3½/5	1s 10d.

On the 20th inst., at Greenock, Messrs. Singleton, Dunn, & Co., brokers:—

Quebec waney boardwood (chiefly B quality)—
About 500 logs, 45 to 58 c. ft. av. per log, 1s. 11½d. to 2s. 3d. per c. ft.

Do. yellow pine timber (180 logs)—
60 c. ft. av. per log, 1s. 7½d. to 1s. 10¾d. (chiefly 1s. 8½d) per c. ft.

Do. yellow pine timber (60 logs)—
45 c. ft av. per log, 1s. 4½d. per c. ft.

Do. red pine—
40 to 50 c. ft. av. per log, 1s. 4½d. to 1s. 5d. per c. ft.

Do. (about 500 logs sold)—
30 to 35 c. ft. av. per log, 1s to 1s. 1½d. per c. ft.
25 " 11½d. "

Do. oak (100 logs)—
50 to 60 c. ft. av. per log, 2s. 6½d. "

Do. elm (40 logs) inferior, 1s. 6½d. "

Do. hickory (7 logs), 1s 7½d. "

Pensacola hewn pitch pine—
80 c. ft. av. per log, 1s. 4½d. "
60 " 1s. 2¾d. "

Do sawn pitch pine—
45 c. ft. av. per log, 1s. 4½d.

A large cargo of St. John, N. B., spruce deals was exposed, and about one-third sold, 8/13×3 in., 10d. to 1s. per c. ft.

LIVERPOOL.

The *Timber Trades Journal* of March 24, says:—There is not much change in the condition of our trade from that noted last week, as the dull and depressed state of the demaud from the manufacturing districts continues without alteration. Of course, there are exceptional articles iu the market which hold a strong position, such as teak and mahogany, arising from various peculiar circumstances, but for most of the leading articles in the trade there is uothing note worthy to remark about them, if we except pitch pine timber, especially sawn wood, which has made a decided upward movement during the past week or two, and from the continued scarcity of vessels there is every prospect of such an advance not only being maintained, but of being still further raised within a very short time. Buyers who declined to purchase at rates current a fortnight or three weeks ago now begiu to find out their error, and are anxious in their endeavors to get hold of handy cargoes at prices at which they would have scoffed a short time ago; consequently there has been much more business done in this line recently than has been the case hitherto.

On the other hand spruce does not seem to improve in price, although the stocks are light and no ships are loading at present; but as the time is now near when deck loads are permitted to be carried, there may be some vessels taken up to load from St. John, N. B. At the same time shippers complain that the prices obtainable in the United Kingdom are at present so low there is no inducement to ship; and, therefore, the exportation will be curtailed until paying prices are obtainable on this side.

LONDON.

The *Timber Trades Journal* of March 24 says:—The long-looked-for revival of trade has not as yet made its appearance, and business generally continues in the same dull state that we have become so accustomed to lately. We have once or twice experienced dull spring seasons, but they generally followed after an especially active fall trade, but there was nothing denoting any briskness in the business done last autumn, and hardly any free-on-board sales entered into for first open water. The present lethargy has continued from the close of last year, with hardly any brightening up of consequence to enliven its monotony. Outside the public saleroom, buyers have been few and far between, and we believe more will be done in the way of consignments thls season than is usually the case, owing to a considerable portion of the first open water goods being as yet unplaced.

TYNE.

The *Timber Trades Journal* of March 24, says:—A little more business is reported generally, but the quantity doing is not great, and leaves great room for improvement. The shipbuilding trade still causes a demand for American goods, and these, with the exception of pitch pine, are firm in price. Of the latter wood heavy stocks are held, and prices are very low. American yellow pine deals are becoming scarce, and prices are a good deal firmer.

NEW BRUNSWICK.

The St. John, N. B. *Sun* says:—The lumbermen on the Bay Shore have had a very fine winter for their operations. It is feared, however, there will be a short supply of water, as there is very little snow in the woods. The amount cut by different operators from St. Martins to Salmon River, Alma, is estimated as follows:—

J. & W. Rourke, St. Martins	3 Millions.
Wm. Davidson, Big Salmon River	8 "
" Mosher's Beach	500 M.
" Martin's Head	2 Millions.
G. J. Vaughan, Little Salmon River	3 "
Geo. Walton, Wolf Rock	1 "
Guy, Bevan & Co., Martin's Head	2 "
Joshua Prescott, Goose Creek	2 "
C. F. Clinch & Son, Point Wolf	5 "
Alma Manufacturing and Ship-Building Co., Alma	6 "

SAGINAW RIVER.

EAST SAGINAW, Michigan, March 27.—Some camps are breaking up and others are hauling. Unless a lumberman is forced to, it is poison for him to break camp, so long as the roads will permit a log to be moved; and many who have accomplished all they calculated on when they went in, are still at work. The roads are good, and there is an abundance of snow, with cold nights. A lumbeaman said to me to-day, "We are, taking old logs into account, 100,000,000 feet short of the amount in at this time last year." This may be so, but it by no means presages a log famine. I apprehend the mills will have all the stock they can comfortably attend to. The rivers are full of ice, and signs of a break-up are not apparent. Wright & Ketchum have put iu about 20,000,000 feet over their log railroad, and expect to haul logs until July 1. Bad river will turn out 7,000,000 feet of hardwood and pine logs. Cass river is good for 10,000,000 feet, the greater portiou of which is hemlock and hardwoods. Murphy & Dorr have broken up one camp on the Rifle, the crew coming out yesterday, and one on the Chippewa. In all they have operated six camps, and have

two or three jobbers putting in logs for them. Their total product will be about 20,000,000.—*Northwestern Lumberman.*

VENEERING.

Of recent years inlaid veneer or marquetrie has attained a remarkable position, and may be said now to have established itself as a permanency in the cabinet work of the age. A quick way of making this inlaid work that has been employed in the United States for some time is to arrange the pieces of veneer alternately—walnut and maple, for instance—and with a very fine marquetrie saw cut the pattern through all the pieces as they lie piled upon each other, thus arranged according to the kind of wood. When this is dône the cabinet-maker has a quantity of veneers before him of various woods with the pattern cut out of each, and on the other hand a quantity of fragile cuttings in larger pieces. All that is now necessary to be done is to set the maple pattern in the walnut veneer, or *vice versa*, and the marquetrie is complete. This has the double advantage of cheapness and durability, and the process is one that has the merit of allowing rapid work, and usually of a satisfactory character.—*The Woodworker.*

THE ATHABASCA.

From a description of the Athabasca River in the Edmonton *Bulletin* we take the following extracts:—"The pass from the Athabasca to the Columbia is known as the Whirlpool pass, and is very high at its summit. The valley of the river between the two ranges of mountains is barren and rugged, with little timber, but the sides of the mountains for a considerable height are well timbered with spruce, poplar, silver pine and hemlock. * * * *

The mountains on each side of the Myette have a heavy growth of hemlock, some of the trees being four feet though. * * * *

From Jasper house to the mouth of Lesser Slave river, a distance of about 225 miles, the course of the Athabasca is to the north east, and the country through which it passes is covered with heavy timber, both spruce and poplar. There is not in the whole of this distance one hundred acres of prairie along its banks. The current after leaving the mountains is very swift, becoming slower as the distance from the mountains increases. It is probable that from Fort Assiniboine to the mountains, a distance of 175 miles, it will be navigable for steamboats, not because there are any particularly dangerous rapids or because there is not water enough, but simply because the current is so swift. The Hudson Bay Company, however, nsed to track their York boats up it from Fort Assiniboine—now abandoned—to Jasper's, without making any portages, and boats and batteux came down safely, but in some places the drop is as great as that of the roof of a house. After leaving the mountains it receives on the north side the Old Man, Baptiste and Lesser Slave rivers. The two former are very large streams rising in the mountains and flowing through a heavily timbered country. On the south side it receives the McLeod and the Pembina, both large. The McLeod flows through a country of almost solid timber and prairie, the former predominating greatly, however, along its banks. * * * * *

THERE is no agricultural land immediately along the Athabasca and very little in its neighborhood, but the fact that the main river and its tributaries drain an immense district of timbered country and that by the building of a short line of railway this timber can be made available for use on the plains, where it is in the last degree necessary for the development of that region, makes the Athabaca one of the most valuable streams in the whole of Canada.

A correspondent of the *Northwestern Lumberman* at Marquette, Michigan, writing on March 28, says.—Work in the woods is going well now. We are having the only first-class hauling that we have had all winter. The weather is clear, with hard frost. I think as many logs will be put in in March and April as all the rest of the season. Men are plenty, and wages $4 per month lower than last fall. The snow is still about four feet deep, on an average.

Rafting in Kingston.

The Kingston *News* says:—Mr. McKay, one of the Ottawa lumber kings, is at the City Hotel. It is his intention to have his logs in future floated down the Clyde, brought to Kingston on the K. & P. and rafted in this vicinity. Heretofore his logs were taken to Ottawa. His operations will give employment to a large number of men, and Kingston will be greatly benefitted by the change.

Parry Sound.

PARRY SOUND, April 7.—Extensive preparations are being made for a good season's lumber business. The Parry Sound Lumber Company's water mill will be ready to start on Monday. Their steam mill is being entirely rebuilt, and when finished will be one of the finest mills on the Georgian Bay. The Midland & North Shore Lumber Company, of Parry Harbor, are putting their mill in first-class order by the addition of new machinery and a large iron burner.

Freight Rates.

The Toronto *Globe* of April 4th says:—There is nothing said about lumber freights, but the opinion is that they will open at the same rates as those of last year, $1.25. There will not be much enquiry for lumber freights if grain should offer at 2c. and 2½c.

It was said in conversation among some vesssel-men yesterday that one of the big schooners was engaged for the round trip, from here to Duluth and back to Kingston. She will take a cargo of coal from this lake to Waubaushene, lumber from Midland to Duluth, and a load of stones back from Duluth to Kingston. The coal freight is at the rate of $1.50 per ton.

Ship Yard Machinery.

Ship timbers require the services of large machines to handle them properly. A Bath, Maine, ship-yard contains a planer supposed to be the largest in the world, It will work a piece of timber 66 feet long, five feet wide and two and one-half feet thick. The keel comes from this machine perfectly true, ready for laying. The same yard contains a big beveling saw, which turns out timber sawed to any desired angle from horizontal. Curved timber and ship-knees can be worked true to a line by it. The same engine that runs these machines also drives a bolt cutter which bites off round iron up to two inches diameter, a large and small circular saw, a machine for making tree nails, a band saw, planer, moulding machine, and a plug and wedge machine. The exhaust steam is used for steaming timber preparatory to bending it. —*The Woodworker.*

Utilizing Steam Liners.

The Glasgow correspondent of the *Timber Trades Journal* says:—From the business transacted during the past week at Clyde ports, no new feature has appeared indicative of any decided change in the market as regards prices. There is still a large supply of pitch pine on hand, and this affects values of Quebec red pine, which, especially small squares, may be said to have receded in price, and also 3rd quality deals. But as prospects of trade are good, and house-letting this spring much better than has been experienced for some years past, there is reason to believe that firm prices for wood goods will be maintained in this market as the season advances. At the same time, as regards deals, it is well known that the carrying power of our Clyde steam liners can be utilized, so that large supplies from Canada might be laid down here in the early summer.

Decay of Timber.

The ordinary life of unprotected timber structures is not more than twelve or fifteen years. Timber exposed to moisture in the presence of air, especially if in a warm place, or to alternate wetting and drying, will decay rapidly. Sap and moisture retained in timber, by painting or closing in the sticks before they are seasoned through, will cause decay of a very insidious kind, as it works in the interior, leaving an apparently sound exterior or skin, which is the layer that had an opportunity to season. Paint on unseasoned timber is, therefore, more hurtful than serviceable. Large sticks of timber dry so slowly that, before they are seasoned throughout, decay may begin, and hence pieces of small scantling are preferable to large ones. Dampness and a lack of ventilation combined will hasten decay. The best seasoned timber will not withstand the effects of exposure to the weather for much over twenty-five years.—*Lumber World.*

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White and Yellow Pine Lumber and Timber.

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L7

SOME lumber is now going from Oconto, Wisconsin, to Milwaukee over the Wisconsin & Michigan road, by way of the Stiles junction with the Eastern Grand Trunk.

LAKE of the Woods was a few years ago almost an unknown sea; now steam tugs to the number of 21 are ready to cleave its waters during the coming summer, mostly in the lumber interest.

IT is stated the Thunder Bay section of the Canadian Pacific Railway will be opened for traffic on the 1st of May. The company expect to do a very large freight business over this section during the present summer.

WITHIN a radius of 16 miles from Dayton, in the eastern part of Washington Territory, 20 saw and shingle mills will be in operation this season, the lumber output from which is placed at an average daily aggregate of 135,000 feet, all of which goes to Dayton.

THE timber land skirting the streams and lakes of northern Dakota is estimated at 600,000 acres, exclusive of the Turtle mountain region, where there are 550,000 acres. The timber is principally cottonwood, although ash, oak and elm are found in considerable quantities.

THE Marinette Barge Line Company is having a new barge built in Milwaukee, that will have a carrying capacity of 600,000 feet of lumber. It is nearly completed and has the heaviest deck-beams ever put into a vessel in Milwaukee, giving her an extraordinarily stiff backbone. Her length is 164 feet; breadth 33 feet, and depth of hold 11 feet.

NEW YORK capitalists are projecting a railroad from Oswego, N. Y., through Richland, or some town further south, into the Adirondack forest region by way of Redfield, Port Leyden and Raquette lake, to the line of the Delaware & Hudson Canal Company's road and the shore of Lake Champlain. The object is to open up this forest section for lumbering operations.

The *Northwestern Lumberman* says:—A letter from a prominent point on the Wisconsin river says that orders are coming in faster than they can be filled. The writer—a lumberman of many years' experience—says he has never seen trade more lively, especially in northern Iowa and all through Dakota, and that Wisconsin trade is also good. Stocks are light and the log crop will not be large.

IT is instanced that 16,000 feet of lumber have been cut from a single sugar pine tree in California; yet, on account of contracts made to out no logs below the lowest limbs, the tops left of trees which yielded as much lumber as stated, were more than four feet through at the base when the last log was cut. It is scientifically asserted that these trees were of giant size 800 years before the Magna Charta was signed by King John, nearly seven centuries ago.

A KINGSTON correspondent says:—Mr. Kidd has a curiosity in the shape of an old Indian pipe which was found imbedded in a huge pine log in Pittsburg, which was felled about 150 years ago. The pipe is made of soapstone, is about three inches in length, and will weigh nearly half a pound. The cavity is very small compared with the size of the head, which is shaped like a "T," one extremity being bored for the stem and the other for decoration.

THE supply of hard and decorative timber for mechanical and artistic purposes will in the near future, it is thought, be largely obtained from Brazil, where the sources of these choice and valuable materials are known to be well nigh inexhaustible. It is stated that within an area of half a square mile Agassiz counted 117 different kinds of wood, many of them admirably fitted by their hardness, tints, and beautiful grains, for the finest cabinet work. One of these, familiarly known as tortoise shell wood, and believed to be the most precious wood in the world, is found in large quantities along the tributaries of the upper Amazon, where the water can be easily used as a motive power.

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CROWN FORESTS.

The following letter appears in the Toronto *Mail*:

SIR,—I venture to submit the following suggestions for legislation regarding our Crown forests and their preservation :—

1. All timbered lands to be properly explored by competent parties, and the quantity of each kind of timber, and the soil as to its fitness for agricultural purposes, reported upon, giving an estimate quantity of each description of timber, and where the soil is not fit for agricultural purposes at least thirty per cent. of the standing value of the timber should be charged as an up set price as a bonus. Before selling give public notice long enough before the day of sale for parties wishing to purchase to examine the limits offered for sale, so as to have competition at the time of sale; then charge another thirty. five or forty per cent. of the standing value of the timber as dues to be collected when the timber is put in market by the lumbermen. This would leave the remaining thirty-five or forty per cent. of the standing value of the timber to cover interest on the bonus paid, the annual ground rent to be charged, and timber that might be taken out of the license by actual settlers.

2. No timbered lands to be given to actual settlers unless the locality were fit for settlement, and that the lot sold or located, say 160 acres, should have a sufficient quantity of cultivatable land on it for a farmer to support himself and family by farming. Whenever sales or locations are made, no renewal of license to be given to the license-holder, providing the purchaser or locatee is in actual possession of the lot, and making improvements thereon, and gives the local agent such information as may be required at least thirty days before the day fixed for the renewal of said license, the timber to still remain the property of the Government, and be liable to future timber regulations, the same as it would be if it were only under license, and be liable to Crown dues the same as the timber that is under license. The remaining sixty or sixty-five per cent. of the timber's standing value would be an inducement to the settlers to save the timber from destruction, and the bonus paid by the lumbermen would give him an interest in the standing timber.

In case of fire breaking out and damaging the standing timber on settlers' land, the owner must not cut, nor permit any other party to cut, any timber not damaged by fire before all the timber damaged by fire has been cut, and the land on which the timber damaged by fire stood is in proper course of being cleaned up for chopping, under penalty of losing all claim to the timber on his land; and the limit-holder should be compelled to cut all the timber damaged on his limit before he cuts any timber that has not been damaged by fire, under penalty of losing his license on the limit; and in case the land is fit for farming pusposes where the timber has been killed or seriously damaged by firo, compel the limit holder to clear the land and put it under crop, and give him all the authority to the land so cleared and put under crop that an actual settler would have.

Have all kinds of lumber held in bond the same as liqour is held by the distiller, collecting the dues on sawed lumber at the mill, and on other lumber as circumstances might direct while in the hands of the owner or limit-holder, any invasion on the part of the ownor or limit-holder to act as a forfeiture.

All timber licenses should expire before the first day of June, and be renewed on or before the first day of August in each year.

By such a system the limit-holder and the settler will each have an interest in the standing timber, and therefore be likely to guard against fires, the revenue will not be materially interfered with by the settlers, and the Government will be saved the enormous expense that the Ontario Government is put to in keeping forest rangers in the lumber shanties to prevent fraud, by not giving correct returns of lumber cut, or by cutting timber on Crown lands and passing it as having been cut on patented lands.

It would also do away with the evil caused by the lumbermen having authority to cut timber for years after the settler is making improvements and living on the land, by the lumbermen coming year after year and felling timber at the settler's door, and frequently leaving the tops of trees on his cleared land for the settler to clear up. Such things have come under my notice, and I am fully satisfied that in retaliation fire has been kindled in a dry time that burnt the lumberman's shanty, and destroyed thousands of acres of valuable timber.

Yours, &c.,
P. W. FREEMAN.

Loughboro', March 26th, 1883.

INSTRUCTIONS FOR CULLERS.

The Hon. John Costigan, Minister of Inland Revenue, submits some new regulations for the government of the Supervisor of Cullers, in respect of the culling, measuring and counting off of lumber and timber. Under them, the Supervisor is required to keep in the office, a book to be called the "Cullers' Notice Book," to which book every culler shall at all official hours have access.

Each square timber culler shall, when instructions to measure any raft or transact any other duties in his capacity as culler, give notice of any expense for travelling or assistance he anticipates incurring in the transaction of such official business.

It shall be the duty of the Cashier to see that such notice book is placed before the Supervisor once on each working day, and the Supervisor shall initial each such entry and place opposite to it such remarks as he may see fit to make—indicating that such anticipated expenditure is either "approved," "considered unnecessary and disallowed," or, if in his opinion too high, "partially disallowed."

The actual disbursement thereafter made with the consent of the Supervisor thus obtained may be defrayed from time to time out of the contingencies of the Cullers' Office.

Provided that such payments shall in no case exceed one hundred and fifty dollars to any one culler during any fiscal year.

DEAL CULLERS.

After the 1st of January, 1883, the fees for "counting off" shall be collected by the Supervisor and deposited to the credit of the Hon. the Receiver-General, separately from fees for "culling or measuring."

The Supervisor shall cause the words "Counting fees" to be written across the face of each deposit receipt transmitted to the Department on account of such revenue aforesaid.

The practice of paying to each culler the sum accruing from such counting off ostensibly done by him—as heretofore followed—shall be discontinued, and instead thereof the Department of Inland Revenue is authorized to distribute from time to time the fees so received for counting off in equal shares to each of the deal cullers in the employ of the Supervisor.

STAVE CULLERS.

The fees established by tariff for culling staves, &c., shall hereafter be distributed in the following proportions :—

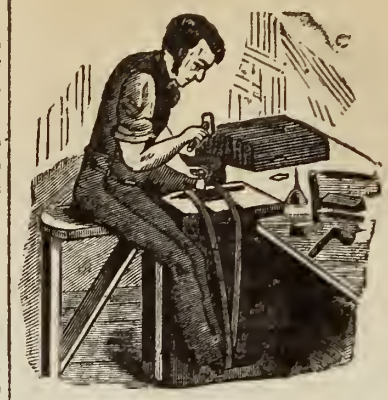
To the Culler - - - 80 per cent.
To the Office - - - 20 per cent.

GENERAL PROVISION.

Any regulations heretofore in force establishing or enforcing the principle of rotation of cullers are hereby cancelled in respect of any transaction in which the Supervisor shall be notified by both parties thereto that any given culler has been mutually agreed upon between them.

SPARK ARRESTERS.

A lumber manufacturer who has had 6,000,000 feet of lumber consumed at one fell swoop by means of sparks from a refuse-burner, is anxious for information regarding spark arresters, and writes this paper to that effect. The *Lumberman* has before canvassed the subject, but takes occasion to again refer to the devices used for the purpose. New-fangled notions and schemes for subduing sparks, while many have been offered, have generally been discarded in favor of first principles. The more common device is simply a wire screen or bonnet, arranged in some cases with an enlarged arm above the stack, or with a hinged joint on a flat opening at the top, the latter being inclined to clog. To obviate this a wire rope is affixed for opening and closing the trap. A patent arrangement was tried, consisting of an inclined shelf placed inside the stack in order to so regulate the upward draft that the cinders, getting out of its control, fell of their own gravity upon the shelf, from whence they were passed by a pipe to the ground. It has not come into general favor. The great secret in conquering sparks lays in the height and diameter of the aperture in the chimney. A tall stack with an aperture not too large to interfere with the draft, yet sufficiently so to stay the velocity of the heat, produces the best results. On the other hand, a small stack built upon the principle of securing an active draft is decidedly the most dangerous, since the velocity of the heated air is sufficiently great to overcome the gravity of the cinders. The stack should have a height and diameter exceeding the actual requirements of the grate surface. The sparks then rise to a height where they are less readily bouyed up, and fall into the ash pit. The heated air when confined to small compass will invariably carry sparks or heavy cinders over the top of the stacks. One way of arranging a screen at the top is in the form of a hollow cylinder without cover, four to six feet high, and with a fine enough mesh to retain the cinders or sparks within the hollow. Where this is attached to a stack of proper height and diameter it is said to word excellently. The free admission of upper air cools the sparks and detracts from the force of the heat draft, so that the sparks are extinguished.—*Northwestern Lumberman.*



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HOW A MILL WAS KEPT RUNNING.

We have obtained the following interesting description of how Mr. Willet's mills at Chambly were kept running through the winter. The water was so low in the Richelieu River, when the winter set in last fall and, owing to the great severity of the winter, it froze completely over and to such thickness that there was only from 10 to 12 inches of water between the ice and the bottom of the river, and consequently backed what water there was on to Mr. Willett's water-wheels burying them in water four or five feet deep, and forcing him to shut down. It stopped the mill completely, and he finally concluded to open a channel, and sent down to the Hamilton Powder Company and obtained some three or four boxes of dualine with flat fuses, four feet long, and went to work with an electric battery. In three days he had blown open a channel about 1,000 feet long by from 10 to 12 feet, thereby lowering the back water at the wheels by some two and a half to three feet. The mills were started and have since been running with good speed. This dualine is done up in half pound packages, and two or three of them are attached to the flat fuse and then the fuse to the battery and it blows the ice all to pieces, and if there is water enough to carry it off it will make the channel and lower the water. The ice disposed of in this case was from two and a half to four and a half feet thick. Mr. Willett writing to a friend in this city says he believes it would be effective in preventing a flood in Montreal in case of any sudden thaw. If the material were furnished he believes he could blow all the ice out of the St. Lawrence and save the city from a flood.—*Montreal Witness.*

OTTAWA NOTES.

The *Monetary Review* says :—The staple industry at Ottawa, the lumber trade, is in the meantime quiet. Purchasers are endeavouring to buy at a reduced price, but the owners of timber and sawn lumber are holding on and will only sell at the old figure. What business has been done lately is therefore only in jobbing lots. The outlook for the coming season is regarded as bright. Those who are now daily arriving from the shanties in the woods report that they have experienced one of the best seasons for lumbering operations that has been vouchsafed for a long time. The weather, although a trifle cold, was favorable for the work, and the sleighing throughout was excellent. This, combined with the almost unprecedented length of the winter, enabled the parties engaged to prepare a larger number of logs for the coming drive than they have been able to do in one season for many years past.

A HEARTY RECOMMENDATION'—Jacob A. Empey, of Cannamore, states that he has taken Burdock Blood Bitters with great benefit in a lingering complaint, and adds that he would gladly recommend it to all.

No person can enjoy health while suffering Constipation of the Bowels. Harsh purgatives always do harm. Burdock Blood Bitters is Natures own Cathartic; it unlocks the secretions regulates, purifies and strengthens the system.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

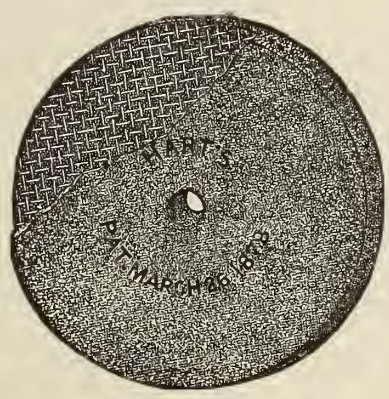
GILBERT HART, Detroit, President. JAMES T. BARNARD, Hamilton, Secretary-Treasurer. SAMUEL BRIGGS, Hamilton, Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened



And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH, GALT.

Messrs. R. H. SMITH & CO., ST. CATHERINES.

JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ., PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

111

ON THE KENNEBEC, MAINE.

The Kennebec *Journal* says :—The past winter for lumbering operations has been one of the best ever known in the annals of the business in Maine. Continuous cold weather has prevailed with very little rain and no thaws to speak of. There has also been an abundance of snow, which falling the beginning of the season has remained on the ground and even now there is sufficient for operating and the lumbering crews are still in the woods. Lumbering on the Kennebec and its tributaries has been very successful during the season now drawing to a close. Something like 110,000,000 feet of logs has been cut and will be floated down the river the ensuing summer. The Hon. John Manchester Haynes, of this city, has operated very extensively. His cut will amount to 12,000,000 feet. He has 12 different camps which will average from 25 to 30 men each. Three are located at Brassua Lake ; one at Parlin pond ; two at Coldstream ; three on south branch of Dead River. Bodwell & Co. will cut three million feet on Dead River ; M. G. Shaw, 3,000,000, Dead River ; Snow & Co., 4,000,000, Enchanted stream ; Townsend & Abbott, 1,000,000, Cold stream ; Clark & Weston, 1.000,000, Eaton pond ; Bradstreets, 1,000,000, Moose River, 3,000,000, Moxie stream ; George Snow, 2,000,000, East Branch ; Eveleth, 2,000,000, Black Brook ; Lawrence Bros., 4,000,000, Brassau ; McPheters, 1,000,000, Black brook ; E. & J. Lawrence, 6,000,000, Moose river ; Elias Milliken, 3,000,000, Moosehead lake and Dead river. There is also a large number of smaller operators whose several cuts will make up the total. The lumbermen will be coming out of the woods very soon now, as the present favorable weather cannot continue much longer. The building of the magnificent dam at Indian Rock by the Kennebec Log Driving Co. will be completed very shortly, as 200 men will be put on the first of April. The structure will cost not less than $12,000. Its object is to facilitate the driving of the logs received from the lake through to the Forks. Messrs. Miliken & Sturgis, as we have before stated, have taken the contract to drive the logs and will employ a crew of about 200 men. The driving season lasts from about the 20th of May to the last of August. Ice does not generally break up in Moosehead Lake until about the 20th of May. The prospect is that there will be a good market for lumber in the future, and the amount cut the past season will find a ready sale. There is not a large stock held on the river at the present time.

DAKOTA BUSINESS.

The growth of the lumber business in Dakota during the next five years must be enormous. The territory comprises an area about as large as Kansas and Nebraska combined, and probably a larger proportion of Dakota is capable of profitable farming than that of Kansas and Nebraska. Certainly all that part of the territory east of the Missouri will be thickly settled by an agricultural population. Though within the last five years settlement has been going on in the middle and the northern portions of the territory, but little farm improvement in the way of buildings has been done. In the Red river valley and along the Northern Pacific road west of Fargo the lumber trade began as late as 1877, and the farmers did not begin to put up substantial buildings till 1880. And yet so rapid has been the increase in the lumber trade of that section, that the amount handled at Fargo during 1881 reached 25,000,000 feet. All the new country along the Northern Pacific, the Minneapolis & Manitoba, the newly opening Devil's lake and Turtle mountain region, which is to be immediately penetrated by railroad ; the Fargo & Southwestern road, now under construction ; the Northwestern to the Black Hills—all these vast regions, now rapidly filling up with new settlers, have yet to be supplied with lumber to build the first permanent houses in town and country. The amount of lumber that will be required for this purposes is simply incalculable. And we must reflect that the supply is not to be furnished twenty years from now—it is not a work of the far off future ; it must be done within the next two, three or five years. The proposition is simply startling. And after the first building improvement has taken place, after sufficient primitive house room has provided for the wants of the earlier settlement, then there will follow the building of large barns and dwellings on farms, and more substantial structures in the towns and cities ; the same process having been witnessed in Illinois, Iowa, Wisconsin, and that is beginning in Kansas and Nebraska. The Dakota trade must be counted on as a powerful factor in the future of the Northwestern lumber business.—*Northwestern Lumberman.*

POSTS SET "TOP END DOWN."

It is firmly believed by many persons that posts set in the ground in a position the "reverse" of which they stood while growing in the tree, will last much longer than when set "top end up." In the spring of 1879 I selected seasoned sticks, three feet long. These were split in two, and then cut in two crosswise, making four pieces of each. One set was placed in a well-drained sand, the other in clay soil. In every case two pieces were set side by side, with earth between, one as it stood in the tree, the other reversed. I tried thirteen kinds of timber. Some of these were young wood with the bark on. All contained some heartwood. Those set in the sand were examined in the autumn of 1881. In case of the beach, sugar maple, ironwood, black ash and black cherry, the piece reversed or placed "top end down," was somewhat decayed. In case of red maple, American elm, butternut and red elm, the piece set "bottom end down" was a trifle the most decayed. In case of basswood, white ash, white oak, and blue ash, there was no perceptible difference. In autumn of 1882, the posts set in clay soil were examined. In case of the red maple, sugar maple, American elm, basswood, butternut, red elm, the pieces set "top end down" were most decayed. In case of ironwood, white oak, blue ash, there was no perceptible difference.

I infer that where one piece decayed more than the other it was caused by some trifling difference in the sticks. The freshly sawed ends in each case were placed uppermost, and came an inch or two above the ground.

In some cases one-half of a stick (one piece certainly the reverse of the other) lasted considably better than its other half. As will be seen, it was sometimes the "top end down" which lasted better, sometimes the "bottom end down," and in some cases there was no difference in durability.—*Cincinnati Trade List.*

THE WILLOW.

Among the various species of trees whose value is overlooked in this country, especially when the soil and climate everywhere are favorable to their cultivation is the willow, which in England is greatly esteemed for many purposes. It is claimed that we import annually $5,000,000 worth, when we can as well raise it successfully in any part of the country. This is demonstrated by the rapidity with which it springs up after being planted by farmers for fence purposes, attaining in two or three years large proportions. In the Eastern States the willow may be seen almost about the grounds of every farm house, but its chief service is to protect the buildings from severe storms, and in summer time to afford a refuge of shade from the intense heat of the sun. The Hon. Jesse Fell, of Illinois, says :—"Were I called upon to designate one tree, which, more than all others, I would recommend for general planting, I would say unhesitatingly it should be the willow." It has been used extensively to strengthen dams, growing very rapidly with far-reaching roots that give strength to the soil to keep it in place.—*Lumber Trade Journal.*

A RIVAL TO THE NORTH WEST.

If we are to believe *Le Nord*, a paper which derives its title from its location, there is in the neighborhood of Lake Temiscamingue, a country of open prairies, excellent soil, abundant timber in pieces, and silver and lead mines of "incredible richness." This region is well watered, and the climate is mild enough to ripen some kinds of grapes. Even where the land is not open prairie, there are miles of land over which fire has swept, cutting down cedars of unusual size. The roots of the cedar are burnt out ; but much of the fallen cedar is well preserved. On some of these spots, a child, we are told, could clear an acre in a week. This country is not distant, but it is admitted to be not easily accessible.

This region is near the great lumbering field of the north, where the farmer gets $50 per ton for his hay, $1 per bushel for oats, $1.50 for peas, and $2.50 for wheat. These prices will not of course last for ever ; for when the lumbering is done prices must come down to the average level.

The Temiscamingue region is a mere speck compared with the great North-West ; and if all that is said of it by *Le Nord* be true, its colonization will not have any appreciable effect on the future fortunes of the North-West. It is possible that many French Canadians may prefer it to the country beyond the Lake of the Woods ; but is not probable that emigration from Ontario will be diverted from the course it now inclines to take by the temptation of the Temiscamingue country.

Already *Le Nord* calls for a railway to Temiscamingue, and the Local Government of Quebec will doubtless be importuned to build or aid in building it. At present, however, that Government is in no position to enter upon new undertakings of this kind and it would difficult to say when it will be.—*Monetary Times.*

The Winnipeg *Commercial* says :—R. J. Bell, of Morris, has ordered a complete outfit for a saw-mill which he proposes establishing at Calgary.

The Brandon correspondent of the Winnipeg *Commercial* says :—Building operations are going on briskly, and large quantities of lumber are daily arriving.

The Western Union Telegraph Company has estimated the durability of telegraph poles as follows : Cedar, 16 years ; chestnut, 13 ; juniper, 13 ; spruce, 7 years. Cedar, chestnut and spruce are used in the Northern states ; juniper and cypress in the Southern states, and redwood in California. Poles cut in the summer will not last as long as those cut in the winter by five years.

Seven inches from the outside of a log in a Pennsylvania mill, the saw passed through a walnut which was imbedded in the solid wood. The shell and kernel of the nut were sound. The growth of the tree shows that the nut is at least fifty years old.

The 'longshoremen of Oswego have met and adopted the following schedule of rates for the opening of the season :—Canada lumber, 20c. ; Canada lumber in vessels and barges of 300 M. capacity, 25c. ; cedar ties, 1½c. ; hemlock and all other ties, 2c. ; shingles, 4c. ; lath, 5c. ; posts per cord, 30c. ; stave bolts per cord, 25c. ; timber per M. board measure, 30c. ; headings 15c. ; telegraph poles a piece, 5c. ; hour work in vessels, 60c. ; hour work in yards, 25c. ; hop poles per M., $3 ; ash and all hard wood, 35c.

The *Lumber Trade Journal* says :—A large portion of the lumber supply comes from Michigan, and Muskegon cuts more lumber than any other city in the world, and so is called the sawdust city. It is between Detroit and Chicago, being 196 miles from the former, and 192 miles from the latter city, and is on Lake Muskegon, which is about six miles long and two miles wide, and into which empties the longest river in the state, penetrating for hundreds of miles into the best pineries in the state. The lake never freezes up, on account of the rapid current into Lake Michigan. There are railroads which connect Muskegon with all the main lines east to the seaboard, and west by water across the lake to Chicago, so it is admirably situated for a shipping point.

Letter from Member of Congress.

HOUSE OF REPRESENTASIVES,
Washington, D.C., Feb. 19, '82.

GENTLEMEN,—Inclosed find $1. and will you send me some of N. H. Down's Vegetable Balsomic Elixir by express. I have a bad cold, as has almost every one else here, but cannot find the Elixir, which I used frequently at home and consider a most valuable medicine ; in fact, the very best remedy for a cold that I ever used.

Very truly yours, WILLIAM W. GROUT.

The Minnedosa correspondent of the Winnipeg *Free Press* says :—Mr. Alexander Cameron, sr., is talking of moving his saw mill from Rolling River to Minnedosa. Mr. Cameron has seen what a great demand there will be for lumber this spring.

The *Wood-Worker* says that saw-mill men should cut lumber full thickness and saw both ends off smooth. It adds much to the appearance by butting off both ends, and the additional cost will be saved in freight. Buyers will give better inspection, if not better prices.

MAIL CONTRACT.

Sealed Tenders, addressed to the Postmaster General, will be received at Ottawa until noon, on FRIDAY, 11TH MAY, for the conveyance of Her Majesty's Mails, on proposed Contracts for four years, forty two times per week each way, between

Peterborough and Midland Railway Station,

and three times per week between

WARSAW AND PETERBOROUGH,

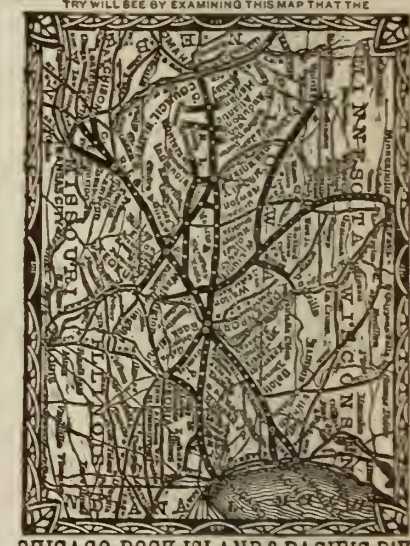
from the 1st July next. The conveyence to be made in a Vehicle. Printed notices containing further information as to conditions of proposed Contracts may be seen, and blank forms of Tender may be obtained at the Post Offices of Peterborough and Warsaw, and also at this office.

Post Office Inspector's office,
Kingston, 30th March, 1883. GILBERT GRIFFIN,
2d80-1w14-2l8 Post Office Inspector.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy ; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

For detailed information, get the Maps and Folders of the

GREAT ROCK ISLAND ROUTE,

At your nearest Ticket Office, or address

R. R. CABLE, Vice-Pres. & Gen'l M'g'r. E. ST. JOHN, Gen'l Tkt. & Pass. Agt.

CHICAGO.

LUMBERMEN'S STATIONERY.

We will supply anything in the line of BLANKS or STATIONERY for Lumber Shanties and Offices at City Prices.

Shanty Settlements
Shanty Orders
Shanty Receipts
Shanty Time Books
Shanty Log Books
Shanty Reports
Shanty Ledgers
Shanty Cash Books
Shanty Way Bills
Drive Books

Office Letterheads
Office Noteheads
Office Envelopes
Office Cards
Office Notes
Office Drafts
Office Orders
Office Receipts
Office Blank Books
Office Ship Account Books

And everything necessary to a complete office outfit.

All PRINTING done in the Highest Style of the Art, and at Lowest Living Prices.

BOOK-BINDING of every Description got up in a very Neat and Superior manner.

Account Books Ruled and Bound to any desired Pattern.

For Schedule of Prices address, describing the kind and quality of work desired,

TOKER & Co.,

"THE CANADA LUMBERMAN,"

PETERBOROUGH, ONTARIO.

EMERY WHEELS FOR SAW GUMMING.

EX INUTILI UTILITAS
TRADE TANITE MARK

In order to remove the difficulties connected with the importation of TANITE GOODS in small quantities, and to bring such goods within easier reach of

CONSUMERS IN CANADA,

we have arranged with the well-known firm of

FROTHINGHAM & WORKMAN

MONTREAL,

To take our sole Agency for the Provinces of ONTARIO and QUEBEC. By this means consumers who want only single wheels, or goods in small quantity, can supply themselves easily and avoid the trouble of special importations, while dealers can secure the most liberal terms, fully equal to those they could obtain by buying of us direct.

Messrs. Frothingham & Workman will carry a full stock of TANITE EMERY WHEELS, and a sample line of Machines, and can fill all orders promptly.

The Tanite Company, Stroudsburg, Monroe Co. Pa.

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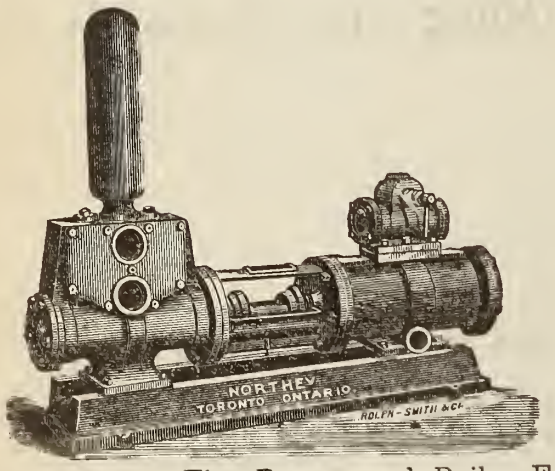
September 28th, 1882.

NORTHEY & COMPANY,

STEAM PUMPS

FOR ALL DUTIES.

ILLUSTRATED CATALOGUE AND PRICE LIST ON APPLICATION.



ALL WORK ABSOLUTELY GUARANTEED.

☞Combined Steam Fire Pumps and Boiler Feed Pumps for Saw Mills, Etc., a Specialty.

WORKS AND OFFICE:

Corner FRONT and PARLIAMENT Streets, TORONTO.

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Represents
No. 5 20-Horse Power
FIRE-PROOF
CHAMPION
SAWMILL
ENGINE
WITH
SECTIONAL
SAFETY
BOILER.

Build 4 Sizes Fire-Proof Champion Engines

6 H. P.
12 H. P.
16 H. P.
20 H. P.

WITH PLAIN OR SECTIONAL BOILER

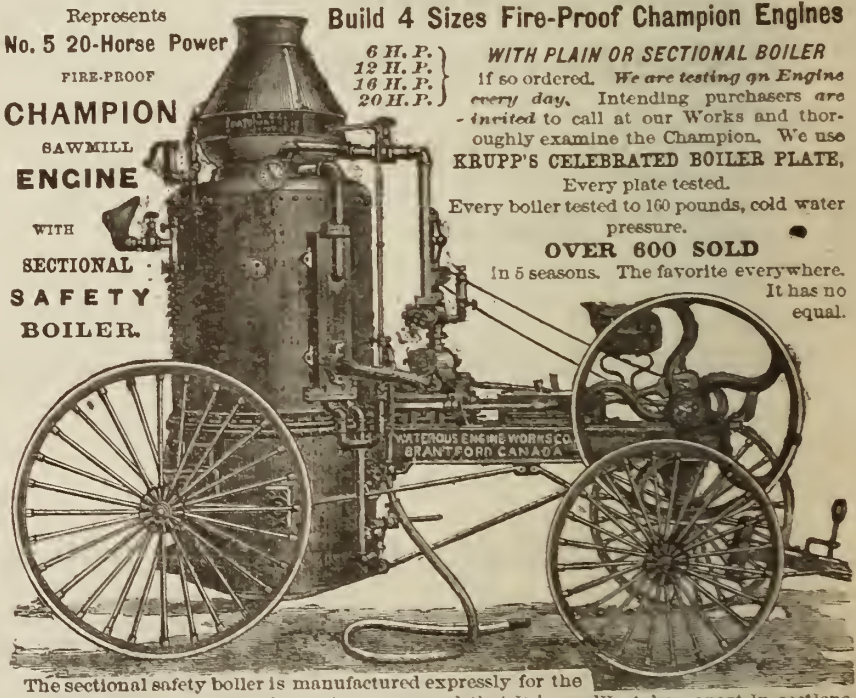
If so ordered. *We are testing an Engine every day.* Intending purchasers *are invited* to call at our Works and thoroughly examine the Champion. We use KRUPP'S CELEBRATED BOILER PLATE,

Every plate tested.

Every boiler tested to 160 pounds, cold water pressure.

OVER 600 SOLD

In 5 seasons. The favorite everywhere. It has no equal.



The sectional safety boiler is manufactured expressly for the "North West" trade. This boiler is so arranged that it is readily taken apart in sections enabling purchasers to clean thoroughly every part of it and prevent burning out. *We know from experience this is absolutely necessary with the alkaline waters of the great Western prairies.* Largely used by the Pacific Railway Company and all the large Colonization and Ranche Companies.

ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

Send for New Circular.

S. S. MUTTON & Co.,

Wholesale Lumber Dealers

TORONTO.

We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.

☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1tf

J. K. POST & CO.

LUMBER MERCHANTS

And Shipping Agents.

OSWEGO, N. Y. 1tf

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

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Office, Tempest's Block, Port Hope. 1l1

CASTORINE MACHINE OIL

CASTORINE AXLE GREASE

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LUMBER

Shingles, Doors, Sash, Flooring, &c.,

WANTED,

STATE QUANTITIES AND PRICE TO

SHORE & DAVIS,

Head Office, 514 Maine Street, **Winnipeg, Man.**

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 3. PETERBOROUGH, ONT., MAY 1, 1883. NO. 9.

FRIDRICKSON BROS. & Co., Selkirk, Man., have got out 30,000 logs the past season, at Icelandic, on White Mud river, and boats are now being made ready for bringing them to Selkirk. The company is having a lumber barge built, 110 feet long.

THE *Lumber World* says:—It is generally supposed that California redwood is a very durable timber, but a gentleman who has had much experience with it says this is a mistake, and that redwood, when exposed to alternations of moisture and dampness, will not last more than from three to five years before being completely rotted. When placed under water so as to be completely excluded from air, it will last for an indefinite period. Planks thus situated have been found perfectly sound after twenty-five years.

A DESPATCH from Quebec of April 17th, says: The high water this spring is likely to assist lumbermen very materially in getting out their logs. Mr. J. B. Charlson, who has some 50,000 logs cut in the woods near Windsor mills, received a telegram yesterday, informing him that the river was overflowing its banks, and telling him to bring up men. He accordingly left at once, taking up some forty men for the drive. The weather is quite close and warm to-day, and the snow is rapidly melting.

THE St. John, N. B., *News* says:—Last January, when Mr. Gibson took stock of his lumber at the various mills in St. John, he had a total quantity available for shipment of 40,000,000 feet. Besides that he had 10,000,000 feet of logs frozen up in the ice on the Nashwask River. This winter Mr. Gibson's cut, as estimated previously by the *News*, will reach a total of 26,000,000 feet. Add to this 10,000,000 feet cut on Grand Lake waters by Messrs. Tayley, which are under contract to the nabob of the Nashwask, and the total quantity of lumber, exclusive of possible purchases, that Mr. Gibson will control this year amounts to 86,000,000 feet.

THE Minnedosa *Tribune*, discussing the lumbering operations in the Riding Mountains, has the following interesting statement:—Forty men and fifteen teams were employed in Jermyn & Bolton's shanty, and with this force nearly 28,000 logs were got to the banks ready for the drive. The logs had to be drawn about five miles and a half. The cut of the different firms is estimated as follows:—Madden & McNee, for Major Douglas, of Minnedosa, 14,000 logs; Hudson Bay Co., Strathclair, 14,000; Whimster & Kyle, Strathclair, 14,000; Cameron & Sons, Rolling River, 4,000. All these firms are actively preparing for the drive, and there will be lively times on the river in a week or two.

APPRECIATED.

To a communication enclosing his subscription for the CANADA LUMBERMAN, and the name of a new subscriber, Mr. Silas R. Lantz, of Paradise, Annapolis County, N. S., appends the following appreciative paragraph:—"Before closing I would like to express my satisfaction in reading your valuable paper. As a lumber paper its value is untold, the information in its columns being very valuable to persons in the business."

THE PEACE RIVER.

We take the following extracts from an account of the Peace River published by the Edmonton *Bulletin*:—

"From Rocky Mountain portage to the rapids, 30 miles below Fort Vermillion, a distance of 459 miles, there is an unbroken stretch of navigable water. The current is strong but not swift, and the volume of water is twice as great as in the Saskatchewan at Edmonton. The river has a stony bottom and there are a few islands, but no sand bars. The banks are very high from the portage to the mouth of the Smoky river. Many large and small streams fall in on both sides of the main river, which having a considerable fall near their mouths would give excellent water power. The south bank is heavily timbered all the way from the mountains down, but the north bank is open prairie. * * * *

The banks of the river in the lower part of its course are low and heavily timbered, as is the country on both sides. The total length of the Peace from the head of the parsnip to the junction with the Athabasca is about 850 miles.

The country along the Parsnip and Finlay branches of the Peace is heavily timbered with spruce, hemlock, poplar and birch, with some pine, cedar and fir. The climate is damp and the snow fall very great—sometimes seven feet at Fort McLoed. On the north side of the river, east of the mountains as far as the mouth of Smoky river, the country is mixed prairie and timber, with the prairie predominating for from fifty to one hundred miles back from the river. The land is high, dry and rolling, well watered by numerous creeks. The soil is a sandy loam, and grass grows luxuriantly. So much so that upland hay can be cut. There are many fresh water ponds and lakes, and no alkali is visible anywhere. One of these ponds 20 miles north of the Mountain Portage, is a round basin of perfectly clear water, without inlet or outlet, and stocked with three varieties of trout, which can be caught at all seasons of the year. The timber is generally much larger and of better quality than what grows at Edmonton, the poplar being larger and the spruce freer from knots. Between the clumps of timber the prairie is clean and would be easy to break. There are very few hay swamps, especially near the river. Fort Dunvegon is situated on the river about forty miles above the forks by land and is in the heart of this prairie country. The prairie extends down the river to Fort Vermillion, but does not come quite to the river bank below the Forks. The soil is richer in this lower part, but it is not quite so high or dry as that around Dunvegan. Below Vermillion the land is low and entirely covered with timber.

On the south side the country is well timbered for about 80 miles below the portage. Below that point to the mouth of Smoky river the bank is heavily timbered, but the back country is only partially so, and after a distance of about 20 miles from the river is reached the Beaver Plain commences, which extends southward nearly to the Jasper House, takes in the upper part of Smoky river on the east and extends west to the mountains. This plain has the same general characteristics as that north of the river, except that it has less timber, but it has wood on all sides of it. Below the mouth of Smoky river on the east and south side the country is covered with timber. The soil in the valley of the river is principally "made" soil and is very rich."

QUARTER-SAWED LUMBER.

The *Northwestern Lumberman* says:—There is no lumber that will shrink so little and wear so long as quarter-sawed. This process of sawing is particularly applicable to yellow pine flooring, as such flooring is generally laid where it is subjected to heavy wear. A bastard-sawed board, no matter from what kind of timber it is cut, will wear rough, and sliver, if in constant use for flooring or driveways. It would be impossible to conceive of a harder, more durable floor than yellow pine would make it it were quartered. The pitch it contains would give it an advantage over oak, ash or maple in a point of durability. A few of the southern mill men are beginning to understand the merits of such flooring, and are selecting the few quartered boards that every log sawed the old-fashioned way invariably has, and putting them in a grade by themselves. It is a bad way of doing, for the balance of the flooring is depreciated in value, and in fact sometimes almost worthless, for no man who is acquainted with its defects would think of making a floor of it. It might answer for a floor that is to be kept carpeted, but usually such a floor is made of softer and cheaper wood. The expense of quarter-sawing would be considerably in excess of the usual way of manufacture, but the flooring would be richly worth the difference. Quartered oak in the large markets is worth, on an average, $10 per thousand more than clear oak sawed bastard, and there ought to be nearly that difference between the two kinds of yellow pine flooring. A log, if quarter-sawed, does not yield as much lumber as if sawed the other way, and sawing it that way is a slower job. Quartered flooring ought to be one of the productions of the southern mills. Builders should not object to paying a third more for it, when they know its beauty and durability are more than doubled, as compared with bastard, and every intelligent builder ought known that such is the fact.

WOODEN BUILDINGS.

The fact that building promises to be lively in the villages and the small cities is an indication that a large amount of lumber will be consumed. The construction of a good sized frame building often calls for more lumber than a large building in a city. Frequently in the latter there is not much wood used, except for floors, and for sash and doors and their casings. There is a disposition in large cities to make the buildings as nearly fire-proof as possible, and in order to do this as little wood as possible must be used. Iron must take the place of wooden joist, wire lath the place of wooden lath, and wood crowded out wherever practicable. As it is somewhat cheaper to build of wood than of brick, and as a wooden house, in appearance, suits the taste of many as well, it is a rule that wood is used where fire limits are not known. The tendency to build of other material than wood will grow in the large cities as the fire limits are gradually being extended, and capitalists come to fear the fire-fiend more and more. Architects are getting to understand the fact that fires in cities need not be of usual occurrence. Brick, stone, iron, terra cotta and glass will not suffer from fire unless some inflammable material is used with them.—*Northwestern Lumberman.*

CALIFORNIAN REDWOOD.

Not only has the traffic in our timber greatly increased of late, but that in the redwood of northern California has increased likewise. In this connection the *Times-Telephone* of Eureka says that the redwood lumber trade of last year makes a most flattering showing as compared with former years, and particularly so in connection with the foreign demand. The books of the Redwood Lumbermen's Association of the Pacific coast show that during the year 1882 the receipts of redwood lumber at the port of San Francisco reached the unusual amount of 97,265,434 feet, and the shipments to foreign and domestic ports during the year amounted to 55,242,305 feet, making the total of 152,517,738 feet manufactured and put into home and foreign markets during the year. The total product for shipment during the year 1881 was 130,465,714 feet, showing an increase in favor of the year 1882 of 22,052,024 feet. Of this increased shipment, 2,000,000 feet were received at the port of San Francisco, and 20,000,000 feet went to other domestic and foreign ports.—*Lumberman's Gazette.*

BOSTON NOTES.

The Boston correspondent of the *Northwestern Lumberman* says :—As to the local trade, it seems but a repetition of previous letters, to one who watches the market carefully. However, it is evident that trade is improving. This assertion may not apply as particularly to city trade as to suburban business. A great deal of building is now under way in many of the towns and cities within a radius of 50 miles of Boston. To be sure, a certain portion of the supply is forwarded from here, but a large portion, although sold by our wholesale men, is shipped direct.

The amount of lumber now to be found at the different railroads is not as large as the corresponding month last year, and the proportion of this that is desirable lumber is quite small. As usual, this stock is largely hardwood—a few cars of pine, but a very poor assortment. Now and then a person will run across a car of good lumber, but it is not apt to remain long ; for, as I have frequently written, good lots sell quite readily in any state of trade. As to prices, I observe no material change. Buyers, as a rule, would try and make it out that they were being offered lots at reduced figures, while the sellers are very firm in their prices, and talk confidently of an early advance on certain grades. I find it is the opinion of certain dealers, whom I believe to be good judges, that dry white pine, the upper grades, will advance slightly, and hold firm until the new cut is in shipping order. Certainly, dry stocks are very scarce at the West, and those of our dealers who have control of such stocks are not liable to dispose of them foolishly.

Yellow pine is holding very firm, and our wholesalers are doing a good business in hardwoods. Ash is selling fairly, and at present prices at which it is held at the mills, it must surely advance. The present supply is quite narrow. There is a good sale for ash that will average 12 to 14 inches, but not many such lots are offered. Oak, cherry and poplar are each having a good sale. There is no noticeable scarcity of either of these. Walnut is selling very fairly, although almost entirely to the manufacturing trade. I hear of sales as low as $80, from that to $90, and for heavy walnut up to $100. Culls sell from $35 to $40 ; a good grade of dry, usually at the latter figure, although the sale of this grade is not nearly as large as it was a few years since, manufacturers preferring better lumber at a higher price. All things considered, the dealers unanimously report trade as very satisfactory for the season, and with a probable scarcity of good lumber, and indications of a heavy trade, the prospects are that prices will remain firm, and dealers will thus have a firm basis on which to reckon their profits.

The spruce men have made a move, and held a meeting recently at Portland, Me., agreeing to advance prices $1 per thousand. If they hold to their agreement, it will undoubtedly help the trade, as past prices have certainly paid little, if any, profit to the producers, and as large risks are taken by many of the manufacturers it is not unreasonable that they should receive a better profit on their investments, than they have obtained the past two or three years.

MONTREAL NOTES.

The *Gazette* of April 19th says :—An improved local demand has been experienced at the yards for both soft and hard woods at steady prices, although some kinds of hard have a stiffening tendency. A fair enquiry continues on American account, but we do not hear of important transactions. Pine, ash, walnut and cherry are the principal kinds inquired for. Dealers look forward to a good trade with Winnipeg, notwithstanding the fact that shipments of logs and sawn lumber are finding their way thither from Minnesota. Laths in this market are firm at the late advance. It is too early to say much about the shipment of deals to Great Britain or of lumber to South America, although we hear steamer room for deals has been offered at 60s. Liverpool.

THE *Witness* of April 19, says :—The lumbering operations of the past winter have been the most extensive, probably, in the history of the Dominion, and the high water which prevails, and is likely to prevail, in all the rivers and streams throughout the lumber regions will enable the lumbermen to forward their logs and timber to where it can be marketed in good time. Although there is every prospect of an unusually large supply, prices are firm and have advanced in some cases, owing to the active demand from American markets, which is likely to continue throughout the season. There is also a very large local demand throughout the country, as the farmers, who have had several good seasons in succession, are about making more or less extensive improvements on their homesteads, especially in the construction of larger and more convenient barns for storing their produce and housing their live stock. There is a fair amount of new buildings in prospect here this season, and lumber dealers are expecting a profitable trade. The shipments of lumber to South America are likely to be large, but it is probable that the demand from Britain will be moderate. The following are the retail prices of lumber per 1,000 feet in the yards in this city—Pine—clear lumber, $35 to $45 ; 1st quality, $30 to $35 ; 2nd quality, $22 to £25 ; 3rd quality, $14 to $16 ; culls, $10 to 12. Long pine lumber for building purpose, $20 to $25 per M ; long hemlock lumber for building purposes, $16 to $18 do ; spruce lumber, $10 to $12 do ; hemlock lumber, $9 to $10 do ; shingles, $2 to $3.50 per M. ; laths, $2.25 to $2.50 do.

The price of laths is now double the amount they were two years ago. Dressed lumber.—Common boards, $16 to $18 per M. ; one and a quarter inch roofing, $16 to $18 do ; 1¼ inch flooring, $20 to $22 do. ; 1½ inch flooring, $24 to $30 do. ; 2 inch flooring, $30 to $35 do. Doors, windows, blinds, &c.—Doors, 7 ft. by 3ft., 2 inches thick, with flush moulding, $3.50 ; the same size with raised mouldings $3.90 ; doors 6 ft. 8 in. by 2 ft. 8 in. ; 1½ inches thick, $2.50 ; doors 6 ft. 6 in. by 2 ft. 6 in., 1¼ inches thick, $2.50.

French windows, six lights, size of glass 14 by 18 inches, $2.50 ; blinds for the above size, $2.85 ; French windows, six lights, size of glass 14 by 16 inches, $2.35 ; blinds for same, $2.60 ; French windows, six lights, glass 12 by 14 inches, $2.10 ; blinds for same, $2.25 ; English windows, twelve lights, size of glass 10 by 12 inches, $2.30 ; blinds for same $2.50 ; English windows, twelve lights, glass 12 by 18 inches, $3 ; blinds for same, $3.65 ; sashes, twelve lights, glass 10 by 12 inches, 90c. ; do. glass 12 by 18 inches, $1.25.

Hardwood lumber.—There is good local demand for most kinds of hardwood and the prices are firm, but generally about the same rate as last season. The following are the prices, per 1,000 feet :—Black walnut, $60 to $100 ; cherry, $60 to $80 : oak and hickory, $50 to $55 ; butternut, $35 to $40 ; maple and rock elm, $30 to $35 ; birch and beech, $25 to $30 ; ash, $15 to $25 ; elm, $16 to $18 ; basswood, $12 to $16.

QUEBEC NOTES.

Messrs. D. & J. Maguire, of this city, have contracted for a delivery at the River Platte the coming season of about five million feet of spruce lumber, all of which will be shipped from Montreal and Three Rivers. The firm also intends shipping several cargoes of red pine deals and staves to the Cape of Good Hope.

THE high water this spring is likely to assist lumbermen very materially in getting out their logs. Mr. S. B. Charleson, who has some 50,000 logs cut in the woods at Windsor Mills, received a telegram on Monday, April 16th, informing him that the river was overflowing its banks and telling him to bring up men. He according left Quebec at once, taking up some forty men with him for the drive.

Timber dealers have made a number of contracts with tug owners at Quebec for towing their rafts to maket this season. The rates are reported as about the same as usual.

A Montreal letter says :—We have had very few visits from Quebec timber merchants so far, which is rather an unfavorable indication, however, as there are considerable heavy stocks ahead in Quebec, sufficient to keep them going until the new timber reaches market, not likely before the middle of July. It is possible that their absence does not signify a dull season, although no sales of timber on the snow are reported. In sawed lumber there is very little being done. If any contracts for the season's sawing have been made, neither the names of the parties contracting, nor terms, have transpired. Although there seems to be a brisk demand for saw logs ; one gentleman sold all he had made, some 25,000 pieces, the other evening, and had scarcely concluded the sale when another mill man approached him with a view to buying, and would probably have given a higher figure.

DAKOTA BUSINESS.

The wood-working interests of Dakota and other northwestern states and territories are being developed in a very satisfactory if not rapid manner. A Minneapolis paper of recent date says : "The manufacturer of cheap furniture in available towns in North Dakota has a profitable occupation before him. There is an abundance of room for men of capital who are willing to come and engage in this business. This class of work has been begun in some places in a small way, and will doubtless grow enormously in the near future. But Grand Forks, Fargo, Valley City, Jamestown, Bismarck and Mandan offer excellent advantages to the manufacturer also. A freight car load of furniture from the nearst available point costs for freight alone about $85 to Fargo or Grand Forks, and of course a greater sum to places further along the line. The cost of the freight on a carload of lumber from Minnesota to Fargo would be about $25. Grand Forks can obtain it at a less cost than this. It is estimated by competent authorities that one carload of lumber can be made up into at least three carloads of furniture. So here the North Dakota manufacturer has a bonus to start with of $255 minus $25—that is $230 on three carloads of furniture. In other words he is "protected" to the extent of over $75 a carload in Fargo and Grand Forks and to a greater extent the further west he gets. The cost of fuel in this part of the country for running machinery is not much in excess of what it is in the towns of Ohio or Michigan. Anyhow, in most wood-working establishments the waste will run the engine. Sash, door and blind makers, too, will find an abundance of work awaiting them in North Dakota. Thousands and tens of thousands of houses are going to be built within the next twelve months or so, and every house must have doors, while vast numbers of them will require sashes and blinds also. Where are these articles to be obtained? The supply of North Dakota sash, door and blind mills can not possibly keep pace with the demand. The establishment of new mills will result in profitable work for employers and men and convenience to builders of houses."—*The Wood-Worker.*

NIPISSING TIMBER.

A correspondent of the Montreal *Gazette* writes as follows :—The first shipment of square timber from Nipissing, went down the line to Mattawa on the 3rd of April. It was taken out by Mr. Moore, I understand, and was very nice timber. They say Mr. Moore has a splendid limit or limits in this Nipissing country, and no doubt his timber will be No. 1, as he employs none but first-class workmen, and he experiences no difficulty in getting such men, as he is held in high esteem by all his employees for the straightforward and manly way he does his business. Messrs. Barnet & Mackie are also sending down square timber by this line. They are old and experienced lumbermen too, and as the place from which they are taking their timber has never been cut over before this season, they must no doubt have some very fine square timber. There are a number of other firms operating in the same vicinity, some of them cutting logs, but nearly all making more or less square timber. One thing is to be noticed that the governments of both the provinces of Quebec and Ontario seem slow to move in, and that is the proper protection of the forests from fire by trappers and settlers. In fact, the only way that this can be remedied is by appointing capable men for the work with power to cause at any time the arrest of any person or persons whom they have reasonable cause to suspect to be the cause of any unnecessary damaging fire.

There is a steamboat on Lake Nippissing which is a great convenience to the lumbermen. The south side of the lake is well settled, in fact nearly all the available good land is taken up. On the north side the land is comparatively worthless in an agricultural point of view. There are a number of Indians still on the north side of the lake, but as is usual where the white man advances the red man recedes, and as many are considerably off color it is quite evident they have mixed with the white race years ago.

It is rumored that there are several lumbermen contemplating the erecting of saw mills. No doubt the C. P. R. Company will find it to be to their interest to be as liberal as possible in freight rates and encourage this trade. Trains on the Canadian Pacific are now running as far west as Sturgeon River, and the road is well under construction for some distance beyond. It is being rapidly built. There is a superior class of workmen on this part of the line. The most of them are shantymen and farmers' sons—a very respectable class. There are scarcely any of the old hardened navvies to be met with here. They have been tried, but were evidently a failure, and their disappearance from here nobody regrets. Teams are now to be seen daily returning home after a hard winter's work. Those teams that work in the lumber woods are chiefly owned by farmers, who, not having sufficient work to employ them at home, start off to the lumber woods in the early part of the season. They are paid this season from $1.50 to $2 per diem and found in board. The wolves are very numerous. The carcasses of small deer, or what remains of them, are frequently to be met with that have been hunted down and killed. In my next letter I will give you a description of the country above Pembroke, westward, &c.

The Toronto *Mail* of April 20, says :—Burton Brothers are making extensive preparations for rafting square timber down to Montreal. Fourteen car-loads were run into the water between piers 3 and 4 at the Northern wharf yesterday. About the same number were floated on Tuesday, and it is likely that the first raft will slip as soon as the way is clear down the canal.

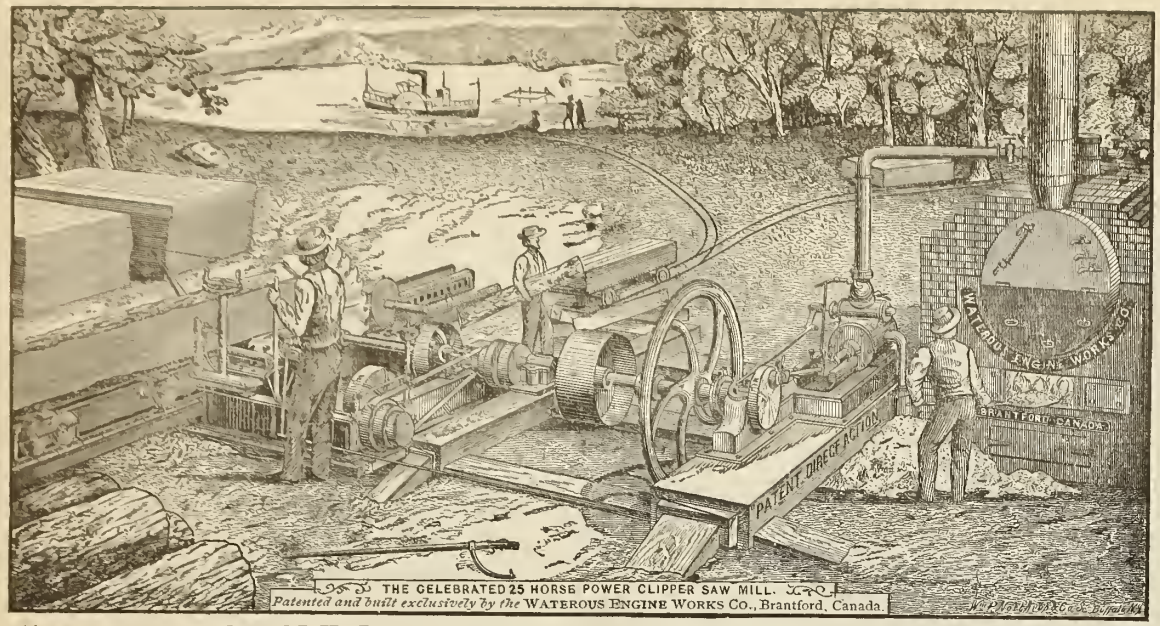
LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on March 31st, 1882 and 1883, and also the Consumption for the month of March, 1882 and 1883 :—

	Stock, Mar. 31st. 1883.	*Stock, Mar. 31st. 1882.*	*Consumption for the month of Mar. 1882.*	*Consumption for the month of Mar.*
Quebec Square Pine	161,000 ft.	119,000 ft.	65,000 ft.	80,000 ft.
" Waney Board	142,000 "	219,000 "		
St. John Pine	18,000 "	10,000 "	11,000 "	6,500 "
Other Ports Pine	42,000 "	29,000 "	4,000 "	4,000 "
Red Pine	41,000 "	27,000 "	14,000 "	— "
Pitch Pine, hewn	545,000 "	635,000 "	64,000 "	201,000 "
" Sawn	450,000 "	410,000 "	62,000 "	189,000 "
Planks	60,000 "	60,000 "	11,000 "	60,000 "
Dantzig, &c., Fir	25,000 "	24,000 "	9,000 "	4,000 "
Sweden and Norway Fir	19,000 "	8,000 "	2,000 "	2,000
Oak, Canadian	201,000 "	264,000 "	29,000 "	30,000 "
" Planks	168,000 "	58,000 "	37,000 "	37,000 "
" Baltic	21,000 "	60,000 "	4,000 "	— "
Elm	29,000 "	45,000 "	6,000 "	5,000 "
Ash	2,000 "	14,000 "	2,000 "	1,000 "
Birch	69,000 "	81,000 "	21,000 "	37,000 "
East India Teak	40,000 "	96,000 "	26,000 "	27,000 "
Greenheart	132,000 "	21,000 "	4,000 "	16,000 "
N. B. & N. S. Spruce Deals	12,614 stds.	10,464 stds.	3,044 stds.	3,659 stds
" Pine	1,145 "	400 "		
Quebec Pine & Spruce Deals	6,387 "	5,848 "	892 "	729 "
Baltic Deals	3,687 "	2,373 "	417 "	442 "
" Boards	340 "	60 "	21 "	80 "
" Boards Flooring	6,642 "	2,048 "	728 "	804 "

Semi-Portable and Portable Direct Action and Belted Saw Mills!

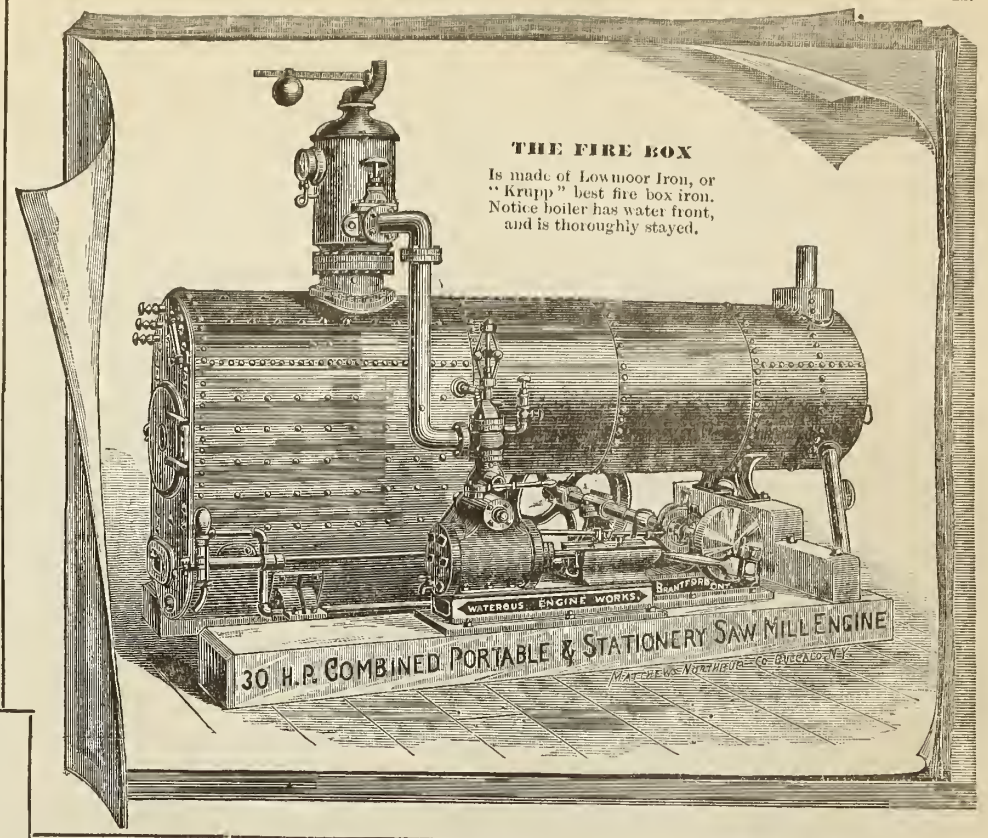
TEN DIFFERENT SIZES.



THE CELEBRATED 25 HORSE POWER CLIPPER SAW MILL.
Patented and built exclusively by the WATEROUS ENGINE WORKS CO., Brantford, Canada.

Above cut represents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞ Specially constructed for hard work.

☞This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.

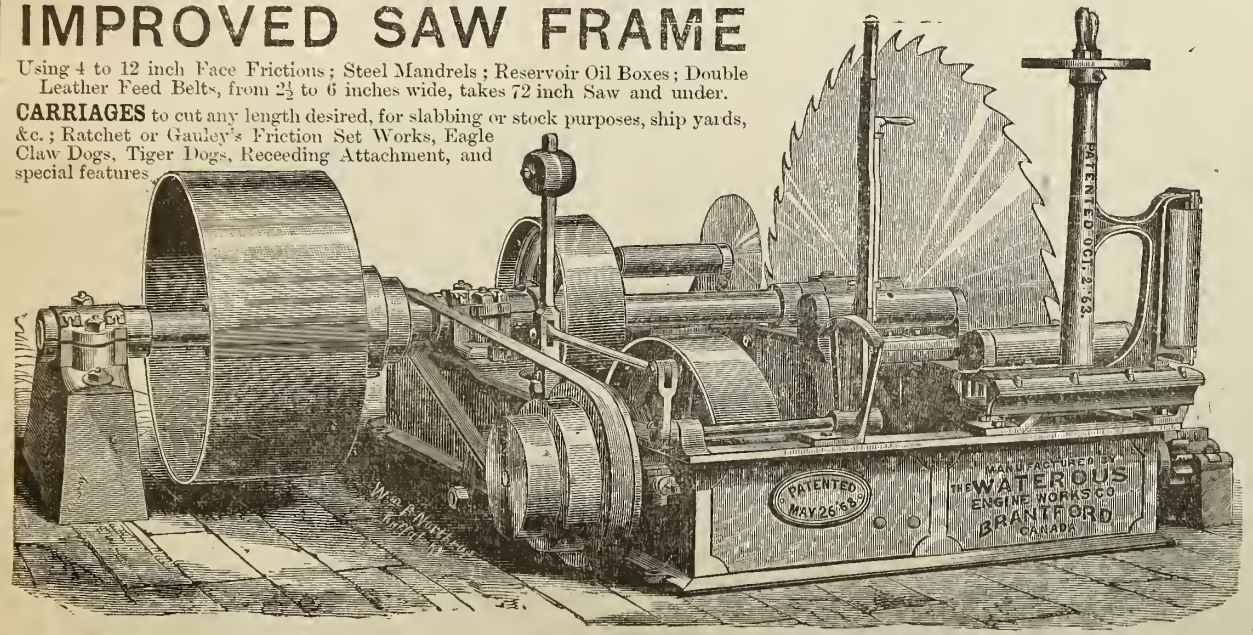


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec.
Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.

The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Ranche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon,
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co., W. W. Stewart, Montreal

Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

☞WATEROUS ENGINE WORKS CO., Brantford, Canada.

Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

QUEBEC FOREST RESERVES.

The following is the text of the measure passed in the Province of Quebec for the purpose of establishing Timber Reserves. The other Provinces might well imitate this good example :—

An Act to further amend chapter 23 of the Consolidated Statutes of Canada, respecting the sale and management of timber on public lands, and the Acts amending the same.

Her Majesty, by and with the advice and consent of the Legislature of Quebec, enacts as follows :—

1. The Act of this Province 39 Vic., cap. 11, is amended by adding at the end thereof the following sections, which shall be taken and construed as forming part of the said act.

"5. The Lieutenant Governor in Council may, as soon as the necessary information can be obtained, after the coming into force of this act, set apart as: "Forest land" all the ungranted lands of the Crown now held under licenses to cut timber," except such parts of such licensed lands on which no merchantable pine or spruce timber grows and which are fit for settlement, and also such other portions of the ungranted lands of the Crown as the Lieutenant Governor in council, on the reccommendation of the Commissioner of Crown Lands, may think fit so to set apart; and as soon as the order or orders in council setting apart such forest land shall be published in the Quebec Official Gazette and from and after the date of such publication, no land included in the territory so set apart shall be sold or appropriated for settlement purposes, until after the expiration of at least ten years, and not then until it is established to the satisfaction of the Lieutenant Governor in Council that the whole or any portion of such territory may with advantage be opened for settlement. The order or orders in Council withdrawing such territory shall likewise be published in the Quebec *Official Gazette.* The land so set apart shall be known and designated as a "Forest reserve."

"6. In the renewals of licenses effected after the publication of an Order in Council creating a forest reserve, it shall be the duty of the Commissioner of Crown Lands to exclude any land theretofore under license in the locality and which is not included in the reserve."

2. Whenever any such lands cease to form part of a "Forest reserve" and for the purpose of securing to settlers, who may thereafter occupy the same, the timber they may require, to facilitate the performance of their settlement duties, section 2 of the said chapter 23 of the Consolidated Statutes of Canada, is amended, by adding after the words: "in all," in the sixth line thereof, the following words: "red and white pine, spruce, tamarac, birch, oak, walnut, cedar, butternut, and basswood."

3. After the coming into force of this act any license issued for the cutting of any timber under the authority of the said chapter 23 of the Consolidated Statutes of Canada and its amendments shall contain a special description of the trees, timber and lumber which it is permitted to cut thereunder, and they shall be of the kind mentioned in the preceding section and none others.

4. This act shall come into force on the day of its sanction.

DEVICE FOR TRANSPORTING LOGS.

THE *Lumberman's Gazette* says :—The great expense involved in transporting logs by raft has stimulated the minds of many who are interested to an unusual degree of activity, and the question has been, and is still with many, can we get up something to transport our logs economically and safely? Cribs have been tried, but so far without success, one gentleman expended $100,000. Some lumbermen have given up all hope of transporting logs and have contemplated moving their mills near the source of supply. Mr. D. W. Case thinks he has solved the problem, He has very recently been granted a patent on a sectional boat designed for the purpose of carrying logs. Mr. Case claims he can carry logs at one-half the cost of rafting. The risks of loss he further claims would be reduced to a minimum, being no greater than the transporting of a cargo of lumber by vessel. He also claims, first, that the boat can be loaded with 500,000 feet of logs in three hours; secondly, it can be unloaded in 30 minutes, and is of light draught. Mr. Case has received numerous letters of inquiry, some parties wishing to make a purchase of the patent. A successful device for carrying logs would be of incalculable value to Bay City, and we sincerely hope it may be all that he anticipates.

SOILS ADAPTED TO HARDWOOD.

Long observation and diligent research appears to have proven that mild loamy soil in which sand and lime are present in a higher degree than clay—fresh, deep, and rich in vegetable mould—is favourable to the growth of many forest trees, such as the oak. Lime is best suited for beech, ash, maples, elms, black and Austrian pines, dwarf pine and yew. A binding clay without sufficient humus is not adapted for forest trees. In the heat of summer it cracks and injures the rootlets. Soils, if rich mineraly, although these yield trees of greater height and solid contents, will, if moist, produce timber of inferior quality and less durability.

The beech requires a strong mineral soil fresh and rich in humus. Its true home is on lime, basalt and green-stone, if the soil is not too thin. It is often found with the oak on sandy-loamy deposits, if not too dry or too moist, but on poorer and lighter soils or in exposed places it grows but slowly. Its wood is usually worth less than other hard woods in the market.

The oak depends less on the kind of soil than on its quality, the amount of humus, and above all, of moisture contained in it. The best growth occurs in a deep somewhat loamy sand, or sandy loam, but it thrives well on loam or sand. Although it prefers moisture, it will not grow in marshes unless drained. In forests the oak attains greater dimensions when grown with other oaks alone; for it thrives best with the crown free, the stem sheltered and in shade, and the foot under covering. The oak also thrives well when mingled with the beech, provided the situation is not exposed or the soil shallow.

The ash and elm have much in common, are found on similar soils, and may be classed together as regards their treatment. The true home of the ash is on a rich, loose, strong mineral soils, abounding in humus and even in binding ones, if fertile. Dry, poor soils are not suitable, and it requires a moist soil. The ash must have plenty of light, hence it does not thrive so well in pure forests. It does well in beech forests, and may be grown with oak, maple, hazel, sycamore, elm, etc., etc. In a word, those mixed forests yield in most cases a larger revenue than either of the varieties alone.

The maple delights in fresh, strong mineral soils, such as lime and basalt—in short, such as the beech, but does not bear so much moisture as the ash or elm. The sycamore makes greater claims on the soil in mineral strength and moisture than the maple.

In general, the effect which the soil and subsoil have on the quality of timber may be expressed scientifically as follows: The combustible tissues of timber, or those liable to decay by exposure to atmospheric or other agencies, are carbon, oxygen, hydrogen, and nitrogen. The absolutely necessary constituents of the ashes, or portions not liable to decay, are iron, potassium, rodium, etc., etc. It follows, then, that according as the percentage of combustible tissue exceeds that of incombustible, the timber will be less durable, and for technical purposes, of less value. Therefore, soils and subsoils in which there is a fair amount of lime, potassium, silica, etc., in a word, those rich in alkalies, produce timber of the best quality; while such as contain an abundance of moisture yield timber neither of such durability nor of so high value.—*Rural Canadian.*

DULUTH BUSINESS.

Duluth is rapidly coming to the front as a lumber producing region. It is predicted that the lumber industry will be prosecuted at that point the coming season with unusual energy, and that the output will be at least one-fourth that of Saginaw River. By some parties the season's cut, which will soon commence, is estimated as high 300,000,000 feet, but probably a closer estimate would be about 250,000,000 feet. The people of Duluth are exceedingly sanguine in regard to the future prospects of that enterprising and thriving city. There are many citizens of Bay City there and they all concur in the belief of a prosperous future for the new city in which they have set their stakes. The northwest furnishes an eager and remunerative market for their lumber, and being on a direct line of rail communication with that growing and thriving country, with a fair prospect of becoming the terminus of the roads, and an extensive shipping point, the enterprising people who have settled there have excellent foundation for the faith that is in them, Duluth must evidently advance rapidly in population, business interests and permanent growth.—*Lumberman's Gazette.*

ST. JOHN, N. B., DEALS.

The *Monetary Times* says :—The lumber export of St. John during March amounted to 1,276,000 superficial feet of deals, battens and boards, 21,000 pieces palings, 530 tons birch and 7 tons pine timber. This went to Liverpool, Glasgow and Dublin. The shipments from that port for the quarter ended 31st, ult., were as under :

Deals, battens, deal ends	9,651,386 sp. ft.
Scantling and board	40,493 "
Palings	39,000 pos.
Birch	830 tons.
Pine	279 "

The timber all went to Liverpool, as did some of the deals and palings. But London got the largest shipment of deals. Glasgow 1,399,000 feet, the Continent 1,341,000, Penarth, Dublin, Greenock, Barrow, Belfast and Africa the remainder.

OTTAWA NOTES.

The *Monetary Times* says under the heading of Ottawa :—The amount of timber cut this season will largely exceed that of the past few years. Although this is the case, the number of logs waiting to be forwarded to the mills is about the same as that of last year. In the way of explanation it will be remembered that the year previous to last there was a scarcity of water, and consequently a good deal of the timber cut then was unable to reach the saw mills.

The supply of water last summer was in excess of what was required, and therefore the cut of the preceding winter not only found its way to the capital, but the retarded portion of the previous year as well. At the close of last season very few lumber merchants had on hand any timber to be manufactured, and none on its way in the river. Indeed, as most of our readers are aware, many of the mills for want of logs had to shut down before the season really came to a close. In a few days the saw mills at the Chaudfere will be in full blast, preparations being at present under way with a view to that end, and no matter how favorable the coming season may be there is an ample supply of timber waiting the freshet to keep the machinery and men busy until the fall.

Mr. Peter McLaren, a prominent lumberman, has stated that his cut this year will be about 80,000,000 feet of lumber and 8,000 feet of square timber. The square timber will be brought to Kingston by train, and then rafted and sent down the river, this trade previously belonging entirely to the Ottawa.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on March 24, says :—Many of the large producers have already acted on the agreement referred to in my last letter, to reduce the log output, and have withdrawn the horses and men from the woods. This is, I am given to understand, more especially the case in the Sundswall district, where stocks are proportionately largest. These measures are already having a beneficial effect, and several transactions are reported during the last fortnight at somewhat higher figures than those current a month ago.

The weather has taken such a severe turn in Norrland lately, that I am obliged to admit that there seems little chance of the timber ports opening so early as was at one time anticipated. There has again been a very heavy snowfall, accompanied by frost, which, at time of writing, has covered the Gulf of Bothnia with ice as far as can be seen from many of the lighthouses. According to present appearances, therefore, no great weight of sawn wood from Sweden can reach Great Britain before June, thus giving a good breathing space to importers, some of whom will be bare enough of stock by that time from all accounts.

Several inquiries are to hand from the Cape and Australia for sawn wood cargoes, but exports to these places are scarcely likely to be equal to last season. Several orders have also been placed to the north of Africa, more especially to Algerian ports and Tunis, where Swedish sawn wood meets with a comparatively new and extending market. Fair sales have also been effected to Spain and Portugal, and reasonable prices have been obtained, notwithstanding the competition of some of the Finnish exporters.

MONTREAL NOTES.

The *Gazette* says :—The prospects for the lumber trade during the approaching season are quite of a cheerful character, and it seems to be now generally conceded that there will be a large American demand for pine, and we understand that some extensive contracts have been already concluded both in this and the Ottawa districts on p. t., but said to be at full prices. Hard woods are held with considerable firmness, as there is a good demand on American as well as local account, the principal enquiry being for cherry, ash and walnut. The advance in laths has been well maintained, sales being reported at $2.50 per 1,000. The export outlook for deals and lumber is said to be very fair, and altogether the prospects are very favorable for a good season's business.

Lake Freights.

The Kingstoon *News* says ;—Private information from Chicago and Detroit has made glad the hearts of vessel owners in this locality. It is stated that the outlook for vessel business is better than it has been for a number of years past, and owners are now unwilling to accept freight that they would have been glad to accept two months ago. There will be more lumber to carry than there was during any previous season, the winter having been most favourable for taking out logs. Every western city is barren of coal, and therefore will require a large amount of tonnage. In consequence of this news the mariners were quite takative this morning.

Indian Forestry.

A report on the forest administration of British Burmah says: One of Ransome's steam tree-fellers has recently been procured from England for use in the preparation of locomotive fuel for the Irrawaddy Valley railway, the demand for which is at present about 10,000 tons a year, The machine is expected to save much expense and labor. The forests where the timber is to be cut will be re-sown with seeds of teak, pyingado. and other trees, the reproduction of which, with careful protection from fire, runs little chance of failure.

THE *Northwestern Lumberman* says :—Surveying the entire field, we find that at the East prices are firm, trade active and promising, causing a confident feeling as to values at the producing points in New England, New York and Eastern Michigan, for pine and spruce as well as at the wholesale markets that derive their supplies from the sections named. At the same time, while there is an acknowledged active demand throughout the Northwest, there is a considerable weakness manifest in the wholesale yard trade about prices. On the upper Mississippi and in Wisconsin the manufactnrers sympathize with the weak feeling, in sharp contrast with the manufacturers of west Michigan, the latter taking their cue from Saginaw. The views of the Green Bay manufacturers seem to be "betwixt and between:" they are prepared to saw lumber to the full capacity of their mills, and take the advantage of either high, medium or low prices. They have yards for assorting and distributing, an unrivaled facility for shipment, and can compete with either Muskegon or the Mississippi. The manufacturers in northwestern Wisconsin, and in Minnesota, seem to have fixed in the minds that lumber this year must be sold cheaper than it was last.

PAPER DOORS.

In the use of wood for constructing doors great difficulty is experienced from the shrinkage, swelling and warping to which the material is subject, while the general use of metal for such purpose is rendered impracticable by its weight.

To obviate these objections, a door composed of two or more sheets of paper-board, secured together and rendered homogeneous, has been devised.

Boards of properly prepared paper are taken, each having the requisite dimensions for a door and a thickness of one-third or one-half the proposed thickness of such door, and within the outer board or boards, openings are cut that correspond in size, shape and location to the ordinary panel openings. The edges of these openings are preferably molded, but, if desired, may be left plain and separate mouldings may be secured thereon after the door is completed. The outer boards thus constructed are then coated upon their inner faces with a suitable adhesive mixture, preferable composed of forty-nine parts of glue and one and one-eighth parts of bichromate of potash disolved in water, and placed upon opposite sides of a central panel board, after which they are passed between rollers and subjected to a heavy pressure which causes the boards to firmly adhere to and become practically homogeneous. The door may now be covered with any desired fire or waterproof coating and then painted in the ordinary way, after which it may be hung and trimmed in the usual manner, and from the nature of the material employed is free from all changes which are produced by atmospheric causes upon wood, costs much less than metal, and has less weight even than a door constructed from pine. —*Paper Trade Journal.*

WATER POWER.

It will be seen from their advertisement that Messrs. R. & G. Strickland, of Lakefield, are prepared to supply water power to any one desiring to establish a manufactory in that village. This is an offer worth considering by manufacturers, as the locality offers many advantages for a factory, being at the terminus of the Peterborough section of the Midland Railway, and at the foot of that portion of the Trent Valley Navigation, which is actually under construction at present, and which will afford cheap means of communication with a large extent of country. It is also at the head of the next section of the Trent Valley Navigation which is likely to be placed under construction, and that at no distant period. As to the power there is a good head with a constant and abundant supply of water.

THE NEW DOCK AT CARDIFF.

The new dock at Cardiff, of which Lord Bute cut the first sod the other day, will extend over thirty-five acres, exclusive of timber ponds, and will cost about £600,000. It is to be completed within three years. The lock will be the largest in the world, its dimensions being 80 feet wide and 600 feet high, while the depth of water over the sills will vary from 26 to 30 feet. The dock will he 2,400 feet long and 600 feet wide, the depth of water varying between 25 and 33 feet, according to tide. There will he timber ponds covering eighteen acres adjoining. All the railway arrangements and the loading and discharging machinery will be of the most complete description. When the new dock is complete there will be a water area in Cardiff basins and docks of 130 acres, and a quayage of five miles.

THE *Argus* of Albany, N. Y., says :—The activity both in selling and shipping has continued with a good attendance of buyers, and the wharves well filled with vessels loading for the east and south. All kinds of pine are being sold and particularly tally boards and plank are in demand. Spruce and hemlock are also going off fast, and some grades will soon he out of market if they are not replaced by rail. Hardwoods of all kinds are in fair stock, and are going off steadily, though the best qualities are in best demand. The manufacturers are still stiff in their prices, and seem confident that they will be able to hold them throughout the season.

HARDWOOD TIMBER.

The *Lumberman's Gazette* says :—On numerous occasions it has been our duty to caution the owners of hardwood lands in Michigan to prevent the slaughter of the timber on the same simply for the purpose of "getting rid of it," and attempted the explanation that in the not very distant future, the timber, if protected, would be more valuable than the land without the same. Proofs of our statement are already coming to light, in different portions of the state. The railroad companies in the state, and other heavy land owners, have in several instances disposed of land from which the purchasers have more than realized the purchase price from the wood removed. Joseph Barber, of Saginaw City, less than two years ago invested in hardwood lands on Swan creek and he has already realized eleven thousand dollars on the investment, and has the lands left. B. B. Bartlett, of Saginaw, bought about the same time a thousand acre farm of new land, heavily timbered lying in one of the townships of Midland, which lies next to Saginaw county. He has already realized enough from the timber, mostly elm, as is the case with that purchased by Barbar, to pay for the land. A gentleman residing in Mason county purchased eighty acres of hardwood land from the F, & P. M. railway company, and secured from the same cordwood sufficient to pay for the land, and has considerable timber still left.

Turtle Mountain Timber.

The *Northwestern Lumberman* says :—The Turtle mountains in northern Dakota, along the British line, and north of the now famous Devil's lake region, is really a high plateau, 20 miles wide and 60 miles in length. It is covered with an almost unbroken belt of timber, clear from underbrush. The growth is poplar, oak and whitewood, of good quality for making lumber. Sloping back from the highland is a rich prairie, which is at present inhabited hy half-breed squatters.

THE *Timber Trades Journal* says :—During the week ending at midnight on the 21st March there were 14 British and 27 foreign sailing vessels, and 6 British and 1 foreign steamers, reported at Lloyd's as missing, or having met with various marine casualties. Of the gross total—48 ships—6 were with cargoes of timber, hut only suffered the loss of three hands between them, of the remainder three vessels all the crew, and three others, 29 men together. The whole number of wrecks &c., dating from the commencement of the year, is 582 sailing vessels and 145 steamers, or 727 ships of all nationalities.

C. H. PLUMMER, of East Saginaw, who is purchasing 7,000,000 feet of so-called hardwood logs, the present season—the entire product of which finds a market in Chicago— informs a correspondent of the *Lumber Trade Journal* that two-thirds of this is ash, the remainder hardmaple, elm, basswood and oak. The grey ash of this section is much preferred in Chicago to similar timber from other states ; but white ash from Indiana is better than that from Michigan, as the rapid growth of timber here has a tendency to make it brash. A mistaken idea, which has gained credence in some quarters, is that there is no considerable supply of this hardwood timber in Michigan. The fact is "the woods are full of it," and that it is to bear a very important part in padding out the timber supply.

THOUSANDS UPON THOUSANDS of dollars have heen spent in advertising the celebrated Burdock Blood Bitters, hut this fact accounts only in part for its enormous sale. Its merit has made it what it is—the best blood medicine ever devised hy man.

Mr. J. R. SEYMOUR, Druggist, St. Catharines, writes that he finds an ever-increasing sale for Burdock Blood Bitters, and adds that he can, without hesitancy, recommend it. Burdock Blood Bitters is the grand specific for all diseases of the Blood, Liver and Kidneys.

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BREAKFAST.
"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack whereever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*
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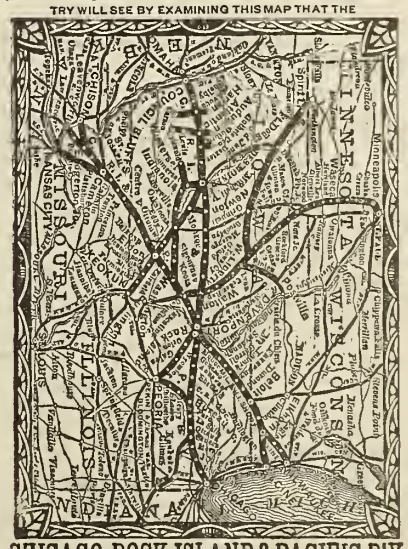
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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

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PETERBOROUGH, Ont. MAY 1, 1883.

MESSRS. Gilmour & Co., Trenton, are making extensive preparations for a heavy cut of lumber. They intend running all their mills day and night.

THE Belleville *Ontario* says :—Fourteen cars of timber arrive here now every evening from Hastings. A force of men is now engaged rafting the same just east of the Grand Junction dock.

THE Emerson *International* says :—Judging from the immense quantities of lumber constantly arriving at the station, our lumber dealers expect a large trade in building the coming fall and winter.

AT a meeting held in Edinburgh on the 30th March, under the presidency of the Marquis of Lothian, preliminary arrangements were made for holding an International Forestry Exhibition in Edinburgh next year.

LESS logs than on last season have been cut on the St. John waters on the Maine side of the boundary line. A Bangor lumberman largely interested in Aroostook, estimates the cut on St. John waters in that county, at 75,000,000 feet.

THE official report of the damage by the Michigan forest fires in 1881 shows the value of the property destroyed to be over two million dollars. Over three thousand buildings were destroyed, and one hundred and twenty-five lives were lost.

THE St. Thomas *Journal* says that Thomas Ouillette, of Anderdon, has shipped from his mill at Colchester, three and one-half million feet of oak car stuff to the London Car Works, at London. He says the demand for that class of timber is greater than the supply.

THE *Northwestern Lumberman* says :—There is a big freight blockade up north, and particularly on the Chicago & Northwestern road. At Winona, Minn., the lumber dealers are having great trouble about obtaining cars. A steamer was recently there brought into service to deliver lumber, and negociations were being made recently for the shipment of 500 or 1,000 carloads by the water route.

MR. ANDREW STALKER is about to establish a large planing mill and sash and door factory at Darlingford, the centre and distributing point of the rich Pembina Mountain district, and likely to develop into a solid business town very rapidly.

A despatch from McIndoes Falls, Vermont, dated April 19, says :—The lumber companies have started to drive ninety million feet, This is the largest quantity ever driven down the Connecticut river. It will require 600 men to perform the work, and takes 125 days to reach Holyoke and Hartford. The expenses of the drive will be $1,500 a day.

AN important trial of rising the osier, or water willow, is to be made by P. V. Lawson, of Menasha, Wis., who has a farm of 1,100 acres near Green Bay. He has ordered 60,000 sprouts from England and Belgium, which he will set out on the low lands on the bay shore, with a view of ultimately furnishing supplies to the eastern willow factories.

THE Belleville *Intelligencer* of April 17, says: The task of driving on the tributaries of the Trent River was begun yesterday morning by a force of men in the employ of Alex. Carscallen, of Marmora; work was begun on Beaver Creek. The rivers in that section have opened well, and the prospect of getting the logs down early is at present quite promising.

THE Belleville *Ontario* says ;—The Messrs. Rathbun intend manufacturing illuminating gas for their establishment and the village generally. It will be produced from saw dust, and the work of excavation preparatory to erecting the necessary works is already well advanced. The works will form a branch of the Chemical Works. Mr. Walker is manager.

THE largest trees are the mammoth trees in California. One of a grove in Tulare county, according to measurement made by members of the State Geological Survey, was shown to be 276 feet high, 106 feet in circumference at the base, and seventy-six feet at a point twelve feet above the ground. Some of the trees are 376 feet high and 34 in diameter. Some of the largest that have been felled indicate an age of from 2,000 to 2,500 years.

A TRENTON despatch, dated April 23rd, says that Messrs, Gilmour & Co's. large saw mill started up on Friday. On Saturday afternoon sawing was successfully commenced. This firm are rebuilding the long row of tenement buildings that were destroyed by fire on Mill street, and are also building three very nice small tenement buildings near the central school. They also purpose charging their employees reasonable rents for their buildings.

THE *Lumberman's Gazette* says :—It is a sight worth seeing the monster roll-ways of the Wright & Ketchum narrow gauge logging railway on the Tittabawassee, four and a half miles above Averill ; and the F. & P. M. roll-way at Averill. At the former grounds are piled 17,000,000 feet of logs, and at the latter 16,000,000 ; filling up the river in each instance from bank to bank for the whole length of the grounds, and presenting an aggregate of wealth in pine logs that is as interesting to spectators as it is comfortable to owners, and there is no small amount of travel in that direction, merely for the curiosity of seeing these monster log piles.

WHILE examining the coal areas of the Saskatchewan Mining Company, Mr. Lawson, engineer of the company, says he discovered the remains of an ancient forest at a depth of over two hundred feet from the top of the ravine. The stumps are plainly visible, and are about two feet in height, and look very much as though the forest had been laid low by the woodman. In addition to this interesting discovery, the fossil remains of a gigantic reptile were found under the coal in a stratum of light sandstone. The skeleton is over thirty feet in length, and is partly exposed, the remainder being firmly embedded in the earthly matter. Mr, Lawson has two of the creature's tusks.

THE *Northwestern Lumberman* says :—In Ogemaw county, Mich., the lumbermen are afraid that many logs will be hung up this season on account of low streams. This may seem strange, when the heavy body of snow that has prevailed is considered ; but it claimed that the ground was unfrozen when the first snows fell, and as the melting process has gone on slowly, the resulting water soaks into the light soil instead of flowing into the streams.

THE ravages of some insect on the spruce trees in Northern Maine, says the Bangor *Commercial*, is becoming a serious matter to owners of timber lands. A gentleman who is well acquainted with the wooded tracts in the vicinity of Rangely says that if the work of devastation goes on five years more as it has for five years past, it will destroy all the spruce trees in that section. The larva, in which state the insect does the mischief, is a green worm about an inch long.

THE *Lumberman's Gazette* says :—It is probable that the coming season will witness somewhat of a decline in the price of walnut lumber. Last year's cut was considerable more than the average, and extensive additions to facilities for cutting and transporting were made, in the way of new mills and tramways through heretofore inaccessible sections. Stocks of lumber in yards are full, the demand having been comparatively dull for several months, and prices are correspondingly weak.

CARE OF SAWS.

A glance at the different saws that are sent to a saw factory for repairs, is sufficient to demonstrate that, notwitstanding the writers on the care and management of saws would seem to have worn the subject threadbare, there are many mill owners and sawyers who do not understand the first principles of keeping a saw in order. They seem to be blissfully ignorant of the use of that indispensable tool in all well regulated mills, the saw gummer, and we find saws filed with square corners under the teeth, inviting a crack which will ruin the saw plate once and forever. The swage also, simple as is its use in the hands of a good workman, is to others only another devise to defeat the very purpose for which it was intended. We have examined saws whose points were hammered down in such a manner that they could not possibly do good work. There is no excuse for this. The economical production of lumber demands that the saw be kept in good order. Every man who has charge of a saw should familiarize himself with the requirements of his position. If his establishment is not supplied with a gummer he should procure one and learn how to use it ; and if, as is probably the case, a swage is used, he should also know how to use that. In the hands of ignorant persons the swage may do more harm than good. These remarks apply more particularly to those establishments commonly known as country mills.—*The Wood-Worker.*

LUBRICATING OILS.

It is stated that a good test for lubricating oils is to place single drops of the different kinds to be compared in line across the end of a piece of plate-glass about twenty-four inches long, one end being six or eight inches higher than the other to form an inclined plane. The drops of oil run down this smooth plane in a race with each other. The quality of the oils for lubricating purposes is shown by the distance travelled and the traces left by the drops. Thus, on the first day sperm oil will be found in the rear ; but it will in time overtake the rest, and retain its power of motion after most other oils have dried up. A light-bodied oil flows quickly, like water, but also dries quickly, whereas what is needed is a good body combined with a limpid flow. Many oils have a good body, but have a teudency to gum ; and this will be distinctly shown upon the glass. It is scarcely necessary to remark that the test slip should be covered from dust while the experiment is being made. The above method will show the physical qualities of different descriptions of oil ; but if the presence of acid is to be detected, another simple device may be adopted. In sheet of bright copper a number of shallow pits are made by the blow of a round-faced hammer. Samples of oil left some days in these dishes on a shelf in the engine room will show, by the formation of verdigris, where acid is present. The existence of a blue tinge of fluorescence in a glass phial of oil is frequently assumed to indicate presence of mineral oil ; but this is an illusory test, since the same is frequently observed in the purest and freshest vegetable oil.—*Scientific American.*

IMPROVED SAWING MACHINE.

An improved sawing machine has been recently patented by Mr. H. K. Olsen, of Coalville, Utah Territory, and designed for felling trees and sawing logs into lengths. The machine can be driven by hand or power, and is capable of working either horizontally or vertically. It has an automatic screw feed for moving the saw forward when making a horizontal cut, and this feed is readily detached when it is desired to saw vertically, so as to allow the saw to feed by its own gravity. The entire apparatus is mounted on a light portable frame, so that it may be easily transported from tree to tree or log to log, as occasion may require. The crank shaft and the driving shaft are mounted in sliding boxes, movable up and down by the windlass at the top of the inclined posts. The crank is wide to admit of the lateral movement of the connecting rod, and it is adjustable as to the length of its stroke ; the design of this arrangement being to adapt the machine to different kinds of work. The saw guide moves through a sleeve that is adjustable along the slotted bar by means of the screw in the slot of the bar. The screw receives its motion from the driving shaft of the machine by a belt. As the crank of the drive wheel is turned the saw is reciprocated, and at the same time moved forward to its work. When it is desired to saw vertically, the feeding screw is disconnected from the saw guide, and the slotted bar is placed in a vertical position, as shown in dotted lines in the engraving. The joint between the saw guide and the connecting rod is swiveled of to admit turning the saw at desired angle. This machine works rapidly and easily, and may be operated by one or more men, or by horse or steam power.—*Scientific American.*

LUMBER FOR OARS.

"This is the oar market of the world," the genial head of a large New York house said, "and few persons not in the business have any adequate conception of its magnitude. It is not an uncommon thing for us to send abroad an entire ship's cargo of oars—nothing but oars. Of course it isn't a thundering big ship, but a pretty good lump of a schooner, for instance. Why, another firm and our firm—we divide the business between us on the staple, selected white ash oars—handle together about 250 carloads of oars per annum, say about 5,000,000 feet, worth at least $400,000 on an average of 8 cents per foot, which is none too high an estimate. We have one contract on hand for the French Government that will take 500,000 feet of ash logs to fill it. As you will readily understand, the consumption of white ash, which is by no means so abundant as many other woods of less value, has made itself seriously felt, and our oar factories are all the time forced to move further and further away to reach new fields of suitable timber. Time was, within my rememberance, when nearly all the oars were made in Pennsylvania, but white ash is so scarce there now that the factories are few and small. The bulk of the oars come now from Michigan and Ohio, though one factory has recently been started as far west as Arkansas. We have four factories—at St. Mary's and Montpelier, Ohio, and Carrollton and Breckeuridge, Michigan. And I don't suppose I'll have to live to be very old to see them shoved out further towards the wilderness to find material. All this applies only to the standard white-ash oars. Two-thirds of those we make are shipped abroad. England is our principal consumer. Those that go to the French Government, which buys enormous quantities, are sent in the rough, that is barely outlined in a rough squared stick of timber. The superannuated marines and soldiers are employed to finish them by hand.

USING UP THE TIMBER.

To the uneducated in the lumber trade no idea can be formed of the vast amounts of timber that are annually cut on this continent, hence many are inclined to oppose economy in the treatment of forests, and are difficult to convince as to the rapid manner in which they are destroyed. Though, when the subject is investigated and statistics examined, it will be seen that a few years of active operations will denude any portion of the most densely timbered lands. Such figures as 24,000,000 feet in one place, 50,000,000 in another and 1,500,000,000 in another, and they representing the cut in the neighborhood of one stream, form but a fractional part of the cut all over the country. The value of timbered lands should be greater at present than ever before, and no matter how far they are removed from transportation they are too valuable to be wantonly destroyed. Just as soon as the most eligible are utilized, necessity will force transportation facilities towards the others, and as a consequence, render them valuable. It is very questionable if any lands in the south, upon which there is a full growth of pine, poplar, hickory, elm, gum or cypress, could be made to produce by clearing them, what the standing timber will be worth in the same given number of years. Therefore, let the southern land-owuers take warning, and not only economize their timber, but hold on to the land for a few years at least.—*Southern Lumberman.*

THE MINISTER OF AGRICULTURE.

In his annual report of Minister of Agriculture for the Dominion says :—The subject of forestry, which is now attracting considerable attention, is under my special consideration and I would urge upou the farming community the necessity of preserving, as much as possible, the trees on their land, not only with a view to the conservation of timber for economic use, but also with regard to the climatic influences attendant thereon. Waste in standing timber should be avoided,and attention should be given to the planting of young trees, to supply the place of those already cut. The effect on climate, arising from the denudation of forests, manifests itself in protracted droughts, and drying up of water-courses, and unless the balance of nature, by means of trees, is restored, the ultimate consequences to agriculture may be very serious. In the Northwest especially, I would urge settlers to plant trees on their homesteads, as soon as they get possession. The beneficial effects of this will be manifold, both as a protection from the prairie wind and as providing a source of fuel and timber for farm purposes. Planting hardwood and pine or other rapid growing trees alternately in belts is recommended, as materially assisting growth. Pine will have acquired sufficient size to be of use, when the time for thinning out arrives. The whole subject of forestry is one deserving the attention of agriculturists especially, and the community generally.

THE BUSINESS SPREADING.

The lumber business is rapidly spreading, and if mills go in as fast as they have for a few years past, operations will be in progress in nearly all the forests of the country. There are plenty of men who remember when Maine was the great lumber state, and when Pennsylvania was called a sort of side show to the general business. The Northwest was an unknown wilderness, and little was known of the timber of the South. A few mills were running on the Pacific Coast, but even twenty years ago the receipts of redwood at San Francisco were only about 40,000,000 feet yearly. Gradually the lumbermen pushed their way into the lower peninsula of Michigan, and thence into Wisconsin and Minnesota. All over these three States mills are located here and there, with the exception of northern Minnesota, and even that section is being invaded. A map of the South, with the location of every mill marked on it, would be spotted indeed. Even in the mountains of West Virginia and North Carolina is heard the shriek of the mill whistles. Mills, of large capacity, are slashing away on the timber of Washington territory—a field that will be a most prolific one. There yet remains on the Rocky mountain slope an immense body of pine, at present, it would seem, almost out of the reach of man, but no doubt in time it will fall before the march of the lumberman—men who do not know what to halt is. It would not be much of an exaggeration to say that every forest from the Atlantic to the Pacific, and from the Canadian line to the Gulf of Mexico, is tributary to saw mills.—*Northwestern Lumberman.*

STEAM CRAFT IN LUMBER CARRYING.

A great change has been wrought in the methods of lumber carrying on the great lakes within a comparatively few years, which is very marked with respect to the traffic between Chicago and Lake Michigan ports. This change is growing more apparent every season. For a long time it was supposed that the winged winds were the only proper power for propelling the lumber laden craft across the lakes, and it was not believed that any less tedious means could be successfully substituted. But gradually, as the operator's business became exte ded, and his profits, in great part, depended upon not only producing lumber rapidly, but upon transporting it in greater volume and more expeditiously than the whims of the wind would permit, he set about to find a way by which he might conduct the carrying part of his business more advantageously. He argued that a businesss that will pay at all will pay best when the best facilities are employed in its prosecution. The mill upon which he had spent thousands for every available improvement, and which, in some cases, was turning out its hundreds of thousands of feet daily, was not rightly mated with the schooner that could take but the cut of a day, and which, at its best, bore it with a snail's pace to market.

Up to a few years ago probably nine-tenths of the lumber produced at many of the more prominent northern points came to the Chicago market by schooner. The proportion has grown less every year, until now nearly half of the lumber cut at those points is brought by steam. It will not be an uncommon thing this season to have from three to five barges from a particular point unloading at Chicago docks, while the same number are loading at the same point to follow in short order.

The spirit of progress and the necessities of the case have led to the now quite general adoption of steam in transporting lumber. The plan at first was looked on as a rather crazy and ridiculous scheme, entirely impracticable, and well qualified as a losing investment. The idea of incurring the expense of an engine, with the requisite amount of fuel and labor incidental to its employment, in place of the gratuitous efforts of the gentle breezes, was looked upon as very bad policy by those advocates of sailing vessels who were wedded to their folly beyond the hope of divorce. But time has shown to whom the wisdom must be credited. Several of the larger lumber concerns, who are manufacturers and jobbers in one, would be to-day unable to transact the immense business which has fallen to their lot, if they had not the expeditious and economical barge system at command, operating with clock-work regularity in taking the product of the mills and placing it at the yards as fast as made, avoiding delay and rehandling, while having an important effect in cheapening lumber.—*Northwestern Lumberman.*

BOOMS IN NAVIGABLE WATERS.

Sir Hector Langevin, in the House of Commons on April 24th, in moving the second reading of the bill from the Senate respecting booms in navigable waters, explained that its object was to legalize the placing of certain booms in navigable waters in New Brunswick. These booms had been erected on the strength of Acts of the local legislature, but it has been decided that these provincial Acts were *ultra vires.* The bill was proposed with a view to obviating the necessity of removing the booms.

Mr. Blake said this was simply a proposition that Parliament should surrender to the Crown the right to say what navigable rivers should be interfered with by the erection of booms, dams, etc. It was also a proposition that the Crown should have authority to say when booms and dams were nuisances and should be removed. This was the assumption of arbitrary power.

Sir Hector Langevin said the power proposed by the bill to be handed over to the Government were not at all excessive. Already the Government had authority to order the removal of wrecks if they interfered with navigation, and the only new power the Government would have under the Act was to compel builders of dams and booms to conform to the law and not to stop navigation where a stoppage of navigation was undesirable.

The bill was read a second time.

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A HORIZONTAL ENGINE, 11x14 in., Fly Wheel 7 ft. Diameter, Band Wheel 4 ft. Diameter, 12 in. Face, Heavy Bed and equal to new. ALSO,

A HORIZONTAL TUBULAR BOILER, 48 in. Diameter, 9 ft. long, with 96 2-in. Tubes, Fire Front, Back Door and Frame, Grate Bars and 40 ft. of Smoke Stack 22 in. Diameter.

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MAIL CONTRACT.

Sealed Tenders addressed to the Postmaster General, will be received at Ottawa until noon, on FRIDAY, 11th MAY, for the conveyance of Her Majesty's Mails, on proposed Contracts for four years, forty-two times per week each way, between

Peterborough and Midland Railway Station,

and three times per week between

WARSAW AND PETERBOROUGH,

from the 1st July next. The conveyance to be made in a Vehicle. Printed notices containing further information as to conditions of proposed Contracts may be seen, and blank forms of Tender may be obtained at the Post Offices at Peterborough and Warsaw, and also at this office.

Post Office Inspector's Office, Kingston, 30th March, 1883. } GILBERT GRIFFIN, Post Office Inspector.

2L8

SAW MILLS

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TIMBER LIMITS

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Logs, Lumber, Store Goods, &c

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In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

Canada Pacific Railway now running through part of the property.

For full particulars address :—

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VALUABLE

Timber Limits

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About 300 miles of limits in the Counties of Joliette and Montcalm, in the Province of Quebec, well wooded with spruce, pine, cedar, and traversed by the La Quarreau, Dufresne, and other rivers.

About 25 acres of land (freehold) with a splendid water power and saw mill, store, dwelling house and outbuildings, on the La Quarreau River, at Montcalm, about 40 miles from Montreal.

About 100 acres of land (freehold) with a splendid Steam Saw Mill, capable of cutting 100,000 logs per annum, a large house for manager, 14 dwellings for employees, large machine shop, planing mill, bakery, store, fire engines and house, wharves, a steam tug, 3 barges, &c., &c., at Charlemagne at the mouth of the L'Assomption River, about 17 miles from Montreal.

Also, booms and dams on La Quarreau, Dufresen, L'Assomption, and other rivers.

Three vessels drawing 6 to 8 feet of water can load at the wharves at ouce, and ships, drawing 25 feet, can anchor with ¾ of a mile from the wharves, and load from barges.

The whole is complete and in running order for carrying on a large and profitable lumber business, and will be sold at a low price and on favorable terms.

For particulars apply to THE EXCHANGE BANK, Montreal, or to

JOHN M. M. DUFF,

Public Accountant,

3L8 118 St. James Street, Montreal.

PUBLIC NOTICE

TRADE MARKS.

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Granted according to Act of Parliament and Registered in England, Germany, Canada and the United States.

J And Beam Engine Marks.

It having come to the knowledge of Messrs. Thomas Jowitt & Sons, of Scotia Works, Sheffield, in the County of York, Merchants and Manufacturers, that several manufacturers and merchants in Sheffield and in various parts of the Dominion of Canada, are pirating the above mentioned marks of J and "Beam Engine," which are the exclusive property of the said Thomas Jowitt & Sons, and which trade marks have been duly registered in the Trade Marks Registry of London, and the latter of which has been duly granted to Albert Alsop Jowitt, of the said firm of Thomas Jowitt and Sons, by the Cutlers Company of of Sheffield, aforesaid, NOW NOTICE IS HEREBY GIVEN, that legal proceedings will be immediately instituted against anyone trading in Goods of Steel or of Steel and Iron combined, whether with or without a cutting edge, which Goods bear either of the above marks, unless such Goods are of the manufacture of THOMAS JOWITT & SONS.

Dated this 21st day of October, 1882.

YOUNG WILSON & Co.,

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THOMAS JOWITT & SONS

ARBOR DAY IN NEBRASKA.

The *Lumberman's Gazette* says :—The proclamation of Gov. Dawes, of Nebraska, is so pregnant with facts and thoughtful suggestions to every person at all interested in forest cultivation and preservation that we publish it entire, and bespeak for it a careful perusal :

To the people of Nebraska :

The subject of forestry, or tree planting, is fast becoming one of importance, and is receiving the careful attention of thoughtful minds throughout our country and in other lands as well.

The steady and rapid disappearance of our forest is viewed with apprehension. We are forced to consider the matter of future demand and supply, and in view of the facts it becomes a question of grave moment. The disappearance of the natural growth of timber has been followed in many states by the drying up of springs, and brooks, and decreased annual rainfall, and consequent increased frequency of seasons of extreme drought. The presence of trees and forests exerts a direct and controlling influence upon the moisture of the air and amount of rainfall, as well as serving to lessen the extremes of temperature and greatly modifying the severity of climate and season. The attention of the general government has been directed to the matter, and it has received substantial recognition at the hands of our national congress, in the passage of what is known as the "timber culture act," which has for its object the securing of timber upon our treeless prairies. Encouragement and incentive in the matter of tree planting are given by the constitution of Nebraska, which says : "The legislature may provide that the increased value of lands by reason of live fences, fruit and forest trees grown and cultivated thereon, shall not be taken into account in the assessment thereof." The state board of agriculture offers liberal premiums for the greatest number of trees planted during the month of April, 1883, by any one person, and for the greatest number planted or put out during the year 1883. In addition to this they offer a special premium—known as the "arbor day" premium—for the greatest number of trees planted upon a given day—divided and classified as to the varities—and earnestly inviting competition therefor from all. The question of tree culture, important as it is to the country at large, is of paramount importauce to our state. Nebraska embraces within her limits lands that are unsurpassed in fertility ; and offering as they do advantages in the way of easy and simple cultivation, they are being developed with a rapidity that is nearly, if not quite, without precedent.

Therefore, to the end that the past gratifying degree of development and improvement may be maintained, and, if possible, increased, I, James W. Dawes, governor of the state of Nebraska, hereby name Wednesday, the 18th day of April, A. D. 1883, to be observed as "Arbor Day," embracing in its design results so varied, beneficial and far-reaching ; having for its aim and purpose the common interests and general welfare of our state, it should be strictly observed by all classes. Having reference both to ornamentation and usefulness ; to beauty and utility ; considering the claims of present enjoyment and ultimate profitable investment, care should be exercised, and selections for planting made from such varieties as have been approved by the tests of time and experiment as suited to the condition of our soil and climate. Be it remembered, that the person who plants and causes to grow—if but a single tree, shrub or vine is contributing his or her mite in the way of added inducement and attraction tending towards that fuller development and ultimate standing of Nebraska, for which we are all laboring and hoping, and which will surely come.

JAMES W. DAWES.

THE BOSTON TRADE.

The Boston correspondent of the *Northwestern Lumberman* says :—It is wonderful what a difference a few pleasant days will make in trade after a protracted spell of stormy weather. Everything and everybody seem to wake up, and activity is noticeable on every side. The trade during March was not quite as large as some had expected, yet for all that it was more than fair, and if this month continues good weather it will bring sales up above the average of last year.

Considerable lumber has come in the past few days, much of which has been shipped since rates dropped. Arrivals by the northern lines are somewhat more frequent, the blockade which has been caused by snow during the winter months having been pretty nearly cleared up.

Pine is selling somewhat more freely than it was the first of the month. Prices remain unchanged, and dealers seem more willing to pay ruling prices, realizing, as they must if they keep themselves properly posted, that prices will not go lower, but stand an even chance of advancing. The best grades of pine are in demand more largely than the coarse, although barn boards are called for quite freely, the trade being about evenly divided between Michigan and Canada boards. I hear of one or two good sized shipping orders having been placed the last week.

Yellow pine continues in good demand, and dealers in this lumber are having plenty of orders. Prices, although not as high as a few months since, are firm, and in this respect are in advance of other markets, and southern mills are soliciting Boston trade quite freely. It cannot last long, for the demand in other sections must soon be up to the supply, and prices will strengthen accordingly. The demand just now is largely for resawed stuff. The supply of boards in the market is quite ample for present demands.

The spruce mills in Maine and New Hampshire are very busy. It has been a big logging year. In some instances more logs have been got in than can be sawed. Orders are plenty, and about all that troubles our yard men now, is that they are unable to have schedules filled fast enough. They all want their orders at once, and somebody must wait ; however, these stormy days which have been a curse in some respects, have been a blessing to those who have been pressed to deliver frames, for it was not possible to use them during stormy weather.

Our hardwood trade holds its own. I cannot say it improves any, although the demand is steady and in good proportions. Prices remain just about the same.

WOOD *v.* STONE PAVING.

"A Large Ratepayer,' writing to the *Liverpool Courier* in reference to the recent meeting of the Council, when the abovo question was a subject of great controversy, says :—" Being a tradesman having premises in Bold Street and also in one of the sett-paved streets, and having taken careful note during many years of the questions involved, I assert, without fear of contradiction,—

1st. That any proposal to remove or abandon wood pavement here would be received with extreme disgust and indignation.

2nd. That, in spite of a suggestiou to the contrary, the pavement has not required renewal, the only portion relaid being a few yards at the top where the surface was much ground by detritus washed from Leece Street, and the relaying of which was on all hands condemned as a piece of extravagance, as the surface was far better than any macadam or sett pavement ever is, and the basement sound and serviceable. The only other repairs have consisted iu sundry small patchings recently made, apparently intended to destroy the neighboring pavement, as they are not impervious to water, as good wood pavement should be.

3rd. That supposing wood pavement does cost more to maintain than setts (its first cost was only about one-half), it is well worth the difference for the following reasons. The comparative quiet euables a much larger amount of mental work to be performed than if the worker wore exposed to the abominable din of a stone-paved narrow strect (five or ten per cent. in the labor of the 2,000 or 3,000 persons employed in Bold Street is no trifle). It is far cleaner than stone pavement. It is far safer for horses—contrary to a snggestion made in the Council. Such a thing as "a horse down" in Bold Street has been almost unknown since the advent of wood.

Lastly, it promotes health, as with it doors may be kept open for eight months in the year, to the great benefit of all those employed in the street. Seeing that, in proportion to our means, we contribute probably four times as much to the local rates as other inhabitants, it is not too much to require at the hands of the Council something like fair and liberal treatment.

In conclusion I would say that whilst in London and elsewhere wooden pavement is being largely adopted, and is universally welcomed, the persistent attempts to discredit it by Liverpool officials is a source of astonishment (and something more).

THE ST. LAWRENCE.

The Montreal *Gazette* of April 17 has the following interesting statistics as to the date of the opening of our great river :—

Up to midnight there was no apparent change in the condition of the river. The water had risen to within six feet six inches of the top of the revetment wall, being a total rise of three feet since noon on Saturday. During the month the total rise has been seven feet four inches.

The following statistics compiled by a gentleman who has made a study of the subject will be of interest. The gentleman in question, who has made a study of the opening of the St. Lawrence for a number of years back with a view of determining the probable date of arrival of vessels in the river, has come to the conclusion that the first river steamer arrives about twelve days after the first breaking up movement of the ice, and the first ocean steamer from 20 to 25 days from the same period. In support of his opinion he furnishes the following figures :—

1878—	First	shoves	17	March
"	"	River steamer	29	"
"	"	Ocean "	20	April
1879—	"	Shove	12	"
"	"	River steamer	24	"
"	"	Ocean "	1	May
1880—	"	Shove "	5	April
"	"	River steamer	17	"
"	"	Ocean "	2	May
1881—	"	Shove	5	April
"	"	River steamer	22	"
"	"	Ocean "	29	"
1882—	"	Shove	28	March
"	"	River steamer	19	April
"	"	Ocean "	6	May

From these data the gentleman referred to argues that as the ice first commenced to move this year on the 13th of April, the first river steamer will arrive from the 22nd to the 25th of April, and the first ocean steamer from the 4th to the 8th of May.

THE AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett, & Co.'s report, dated Melbourne, February 14th, says :—Since last issue the deliveries of timber from the store-yards has continued on a large scale, for supplying works in progress and contracted for some time since. The increased rates now ruling for moncy aud the failure of the Victorian loan in London will undoubtedly in the near future have the effect of largely curtailing the demand for all descriptions of building materials. Prices realized at auction are lower, but unless the market is unduly forced we believe prices are now as low as they are likely to be for some time to com. American lumber.—Sales ex Penobscot, 1¼ in. Canadian clear, £12 7s. 6d., and 1½ in. do., £14 12s. 6d.; 12 in. shelving, £10 15s. Ex Belle of Oregon, Michigan clear, 2½ in., £18 7s. 6d.; 3 and 4 in. do., £18 ; 1¼ in. Canada do., £13 12s. 6d. to £13 10s.; 1½ in., 2 in. do., £14 ; 12×1 dressed clear, £15 to £14 17s. 6d.; 12 in. w. p. shelving, £11 5s. to £11 7s. 6d.: 12 in. do., £10 2s. 6d. to £10 ; 11 in. w. p. t. and g. ceiling, £9 7s. 6d. Ex Penobscot, Tillie Baker, City of Adelaide, and Loining, 1¼ and 2 in. Michigan clear, £17 7s. 6d. to £17 ; 14 in. w. p. shelving (inferior), £18 12s. 6d.; 16 in. do., £9 to £9 15s.; 12×1 dressed clear, £15 per m. feet snper. Shipments of this liue have now supplied trade requirements, although stocks are not heavy. The fear of transhipment from the other colonies has had a depressing effect, and prevents any desire to increase stocks beyond immediate requirements.

Messrs. C. S. Ross & Co. report :—The arrivals of timber have been very large, especially in flooring boards and colonial woods, consequently prices realized for heavy parcels offered show a further decline, and it is now evident that the very large demand which has existed for the past year is rapidly falling off, owing to the stoppage of speculative building. The attendance at sales continues above the average of former years, but the bidding is very slack, and each succeeding offering shows a slight decline in prices. The stock in hand is considerably above the quantity held at any previous period in the colony's history, and unless shipments next season are unusually light, prices will be far below the cost of importation.

Arbor Day.

His Honor the Lieutenant Governor of the Province of Quebec has just issued a proclamation in accordance with the bill passed during last session respecting the culture of forest trees, which enacts, among other things, that the Lieut. Governor in Council shall have power to fix a day known as Arbor Day. The proclamation provides that, as the climate is not the same in all parts of the Province, two divisions will bs made ; one, to be called the Western Division, will include the counties west of Three Rivers, and the other, the Eastern Division, will embrace the counties situated east of Three Rivers and Nicolet. The 7th of May is fixed as Arbor Day for the Western Division and the 16th of May for the Eastern Division. All persons throughout the Province are invited to set aside the above mentioned days for the planting of forest trees, and all corporations, municipal, religious and others, are especially requested to use their influence for the success of this important work,

Railway Earnings.

THE annual report of Mr. A. White, Traffic Manager of the Midland Railway of Canada, contains the following paragraph :—

"Coming down to an analysis of the freight earnings, which yield more than two-thirds of our trade, we find in the first staple commodity, viz.: lumber, that in 1882 was earned $171,853, and from the quantity on hand at the present moment, as compared with stocks held this time last year, combined with the known nnmber of logs that have been harvested during the recent winter, we may calculate upon an increase in our lumber receipts of twenty-five per cent. On square timber in 1882 we earned $21,814, and have already under contract this year more than double the quantity of timber we carried last year."

A Timber Merchant's Benevolence.

Mr. Amos Roe, of the saw-mills, Worcester Wharf, gave a treat to upwards of 2,000 poor children in Bingley Hall, Birmingham, on Good Friday. A few years ago Mr. Roe invited several poor ragged children in the neighborhood of his works to breakfast on the morning of Good Friday. The invitation was repeated annually, and the number of children became so large that adequate accommodation for them could not be found at Mr. Roe's works. Last week, through the kindness of Mr. J. Lowe and the committee of the Cattle Show, Bingley Hall was placed at the disposal of Mr. Roe, and there, by nine o'clock, upwards of 2,000 poor children had assembled for the treat provided for them.—*Timber Trades Journal.*

THE *Northwestern Lumberman* says :—The mills on the Mississippi are starting up for the seasou, logs are going down the river, and soon the new cut will begin to move into the trade. It is likely that the markets at valley points will have an ample supply of new lumber before the jobbers of this city have made up their minds to re-stock their yards. The demand from beyond the Missouri promises to be prodigious iu Kansas and Nebraska, while the Dakota boom in emigration will call for an amount that was not adequately estimated last winter. Individuals who have travelled westward say that the rush of new settlers to all the unoccupied sections in Kansas, Nebraska and Dakota is unprecedented. Trains are crowded with people and their movables ; and, as they are going out in advance of any preparation for shelter, a vast number of houses will have to be built to cover them before snow flies next winter.

Chips.

THE Belleville *Ontario* says :—If the lumbermen have as good luck this season as last some of them may safely retire from business rich men.

THE *Northwestern Lumberman* says that every indication points to a booming demand in Dakota, Manitoba, and the Northwest Territories.

A PITCH pine tree on Grant creek, Missoula county, M. T., is reported to be 125 feet high, and 27 feet four inches in circumference, five feet from the ground.

CYPRESS timber, at Orange, Texas, was sold at $12 a stick, for the best, lately—a good figure that made it probable that there would be renewed activity in the swamps.

So many logs have been cut and hauled this season in Maine that it is thought the mills will not be able to saw more than half of them. In the Machias Basin alone 30,000,000 feet of logs have been cut.

Messrs. R. & G. Strickland have cut this season in their limits in Hindon and Oakley, over 300,000 cubic feet of timber for the Quebec market. They have also cut about 50,000 from the same limits.

A GREAT fire broke out at Cacilhas, on the Tagus, opposite to Lisbon. The English cork manufactory belonging to Messrs. Bucknall & Sons was totally destroyed. The loss is estimated at £100,000.

THE cherry tree which Mr. Gladstone felled in a snowstorm during the Easter recess has been presented to the Burslem Liberal Club, whose members purpose holding a bazaar in September next, and intend to have a number of articles made of the wood from the tree.

THE Kingston *News* says that the risen waters at Milhaven on Friday April 13th carried away two dams, and then lifted Mr. H. Fairfield's saw mill and deposited it bodily in the bay, when it went to pieces. The water also undermined the grist mill. Mr. Fairfield will build a new mill as soon as possible.

THE annual official report of the Dominion Minister of Agriculture urges farmers to give their attention to the subject of preserving our forests ; settlers in the North-West are urged to plant trees on their homesteads as soon as they get possession ; hardwood, and pine, or other rapid-growing trees, alternately in belts, being recommended.

BOSTON, Mass., has set out to scoop its rivals with a new industry. The Boston Lamina Wood Company is making a three-ply wood scoop for tea and groceries. The middle layer is placed with the grain of the wood running at right angles to that of the two outer layers. The scoops are given two heavy coats of shellac varnish. They are pronounced more serviceable than tin scoops.

AT Fergus, Ontario, a jam of logs and ice over a mile in length was blocked for several days on the Grand River, above Reid's mill, but the heat started it on its downward course. It carried away part of Reid's dam and lodged against the bridge above Wilson's mills, but Semple's dam succumbed to all before it and passed down the river. It will cost upwards of $1,500 to replace it.

THE *Lumberman's Gazette* says :—We occasionally read of large trees of different varieties, but New Albany, Ind., has an apple trees in comparison to which all other apple trees in the country are dwarfish. The trunk of this famous apple tree is eight feet in circumference. Even a pine tree eight feet in circumference is no insignificant specimen, but an apple tree of that size is a monster.

THE *Lumber World* says :—Locust timber is one of the very valuable of Southern woods. For certain uses in ship building it has no equal. Where strength and durability are required, its value is acknowledged. Fence posts made of it have been known to be in the ground for sixty years and remain perfectly sound. The tree is a beautiful one, and grows very rapidly, hence its special adaptability to artificial culture. The Southern states are not yet much in need of timber cultivation, but the locust will flourish in other less favoured portions of the country, as well.

THE Ottawa Board of works has decided to authorize City Engineer Surtees to call for tenders for tree-planting and boulevarding in the public streets.

IT has been demonstrated from a scientific standpoint that the greater portion of Switzerland would have been uninhabitable years ago were it not for the systematic cultivation and preservation of forests, which are cared for as strictly almost as a private park.

A CORRESPONDENT of the London *Timber Trades Journal* writing from Alexandria, Egypt, says the stocks of Swedish wood there are large, and as the merchants foresee that some time must elapse before building to any extent is commenced, they are not at present inclined to increase them.

THE *Northwestern Lumberman* says :—The cry that mahogany is rapidly superseding, and will take the place of, our native woods for furniture, need not scare anyone who owns hardwood lumber piles or timber. Distribute all the mahogany that comes to America in a year among the furniture factories, and every man who buys a piece of furniture might be able to get a small sliver of it, but hardly more.

THE Winnipeg *Commercial* says :—R. J. Short expects that his new saw-mill between Rat Portage and Keewatin will be ready for occupancy by the beginning of June. The output of lumber this year will be about 8,000,000 feet. He has also taken out 185,000 ties, 10,000 telegraph poles and 5,000 piles. He is also putting a tug on the lake to do his own towing. This will be ready for work by the opening of navigation.

AN Illinois correspondent of the *Northwestern Lumberman* says :—This is about the time that people begin to "trot out" their big logs. I can start the racket with a black walnut seven feet eight inches in diameter across the stump and 12 feet long ; and the mystery of it is how it came to grow perfectly sound. It is as sound as a "trade sheckel." I've got six others nearly as large, and the seven logs hold two flat cars pretty close to the track.

THE *Timber Trades Journal* says :—If the depletion of the forests of the Northwestern States of the Union is as imminent as some statisticians try to make us believe, the abolition of the duty presents a grand opportunity of saving their own trees by using those of their neighbors. Unfortunately Canada was said to be in the same plight, and pine was getting quite a scarce commodity. Still the world goes on, and plenty of it comes forward.

THE *Lumberman's Gazette* says :—The state of New York at present only owns a trifle over six hundred thousand acres of timbered land in the Adirondack region ; hence the interference of the legislature of that state for its preservation comes none too soon. This action has been necessitated to prevent the floods on the Hudson river in the spring and fall, and exceedingly low water in mid-summer, which already seriously impede navigation at Troy, Albany, and other localities between the latter city and Poughkeepsie.

OWING to the rush of high water in the Rideau, the stone foundation of McClymont & Co.'s new mill office, in course of erection on the bank, was loosened. The latter occured to such an extent that it was deemed necessary to tear down the whole structure. This was proceeded with, and the firm will be put to a lot of additional expense in reconstruction as soon as the water has receded far enough. Among the places flooded in the village of New Edinburgh are McClymont & Co.'s mill yard, and Mr. Alex. Lumsden's boathouse and wharf. The damage to both places will amount to about $200.

A GENTLEMAN recently from Dakota, tells the *Northwestern Lumberman* that there is a deplorable lack of lumber in some of the new towns springing up in the territory. The embargo during January and February prevented the shipment of lumber, and since then the requirements of the settlers have been so urgent that little beside their goods and stocks have been transported. Common lumber sells at $18 per thousand, with a dozen buyers for every board there is for sale. At many points household goods are sitting by the railway track, with no material to make houses to shelter them or their owners.

Lumber Drivers' Calks

For Use in Stream Driving to insure a safe footing in Slippery Places.

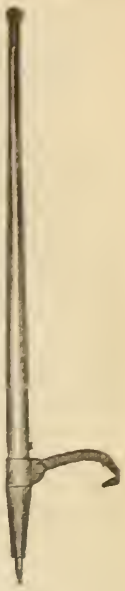
25 in ball and 5 in heel are the numbers usually required.

PRICES for the six different sizes and for Calk Sets and Punches for adjusting Calks, on application to

T. McAVITY & SONS,

Dealers in Lumber and Mill Supplies,

ST. JOHN'S, N.B.



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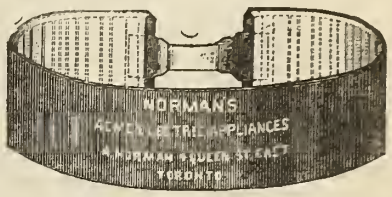

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Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1YL7

British Columbia.

In his evidence before the Committee on Immigration, Dr. Dawson, Assistant Director of the Geographical Survey of Canada, said :—

"The Queen Charlotte Islands contain about 70,000 acres of excellent agricultural lands, covered with heavy forest timber. The yield of wheat per acre on Vancouver Island is from 35 to 40 bushels. The whole seaboard and a large portion of the interior have abundance of timber for commercial purposes, the largest and most generally used being the Douglas pine, which attains an ordinary height of over 300 feet and a diameter of 8½ feet. White pine of an excellent quality abounds, while the spruce and hemlock are very superior in quality to what they are on the Atlantic coast. The forests have not suffered by fires owing to the humidity of the climate. The leading resources of the Province in order of importance, are timber, fisheries, mines and agriculture."

Lumber in the East.

A Portland, Me., despatch of April 10 says a meeting was on that day held by prominent lumbermen of Maine, New Hampshire, Vermont and Rhode Island, representing 250,000,000 feet of lumber, a protective association was formed and a committee was appointed to draw up a schedule of prices for the coming season. It was developed that less spruce lumber has been cut during the winter than was expected, and that the amount expended for labor and teams was higher than usual. It was decided to keep prices at about last season's figures. This combination controls the spruce market. Another telegram says the lumber dealers of New England propose to raise the price of building lumber $1 per thousand.—*Northwestern Lumberman.*

A Warning.

The time has come when the refuse of the logging camp begins to dry and get ready to be converted into fierce flames, provided some hunter, explorer, or thoughtless boy, drops a lighted match. Every operator knows this, yet what will he do about it? Simply nothing. He will not sweep together and dispose of the powder that all the summer and fall will be a standing menace to his own, and his neighbor's safety. He will not expend a single dollar for insurance. He will depend on big rainstorms and Providence, and if these fail him, he will go around grumbling as usual because there are not laws enacted to force him to do what he knows he ought to do. A single forest fire may sweep away property that is worth millions, but no precaution is taken to avoid it. The saws of the mills of the Northwest will dispose of the pine fast enough without the assistance of forest fires. When the final summing up comes we fear that more carelessness will be charged up to the logger's account than he can stand.—*Northwestern Lumberman.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cuttiug teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry aud diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, aud gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

Market Reports.

MONTREAL.

From Our Own Correspondent.

APRIL 25.—Business has been quiet lately and sales have been rather light, as buyers are awaiting the opening of navigation in order to make purchases ex vessel. It is expected that about the same amount of building will be done this season as was done in the last. Prices have not varied much as yet. Last season's rates still rule, except for laths which are now worth $3.00 per M. and scarcely any to be had at that figure; last summer they were sold at a $1.35. The supply of ash is very light, and for which there is a good demand. Other hard woods are in fair demand in a retail way. We quote ex yard as under.

Pine, 1st quality, ₩ M	$35 00@40 00
P ne, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@00 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	3 00@ 0 00
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

SHIPMENTS AND FREIGHT.

It is rather too early in the season to say much about shipments. It is roported that contracts have been entered into at Quebec for delivery in the River Platte of about 5,000,000 feet of spruce lumber to be shipped from here and Three Rivers. We have been unable as yet to ascertain the rate of freight; steamer room, from hence to Liverpool, for deals has been offered at 60s.

LIVERPOOL MARKETS.

Owing to the frost and severe weather during the month of March business has been quiet. At the last auction sales of spruce deals an advance in price was obtained, but not so much as was generally looked for. Two cargoes from St. John, N. B., were sold averaging £7 9s. 6d. and £7 11s. 3d.

CORDWOOD.

The demand during the past week has been pretty lively owing to the cold weather. The supply is good at the railway station, but at the moment there is a lull in the imports, as the ground in the country is too wet to cart the wood to the cars. Owing to liberal receipts and the near approach of the opening of navigation, the market is easy and prices lower with a falling tendency. We quote ex cartage:

Long Maple	$ 6 50
Short "	6 00
Long Birch	5 50
Short "	5 00
Long Beech	5 00
Short "	4 75
Long Tamarack	4 50
Short "	4 00

OTTAWA.

From Our own Correspondent.

ARPIL, 24.—The Grand Union hotel was besieged with lumber merchants this afternoon, when a number of valuable timber limits were put up at auction by the Merchants Bank of Canada. The berths were known as numbers 23, 43, and 51, the area of each being 36 square miles. Amongst the more prominent lumber kings noticed, were Messrs. David Moore, R. Klock, D. A. Macdonald, of Ausable, Michigan, J. McKay, Renfrew, J. Bell, Pembroke, J. McCann, Wm. Hurdman. Wm. Conroy, Aylmer, J. Rochester and other local mill and limit owners. There were also present a number of bankers. Berths 43 and 51 Georgian Bay were offered in one parcel. The bank officials could give no report on these berths and consequently no intelligent idea of the value could be formed; they were therefore withdrawn, not before, however, $5,000 had been bid. The other number 23, one of the most valuable limits now in the market, was next offered. The situation of this berth is on what is known as the Widow river. The C. P. Railway passes through it and this has consequently enhanced its value, as it affords facilities for shipping by rail. Competent judges estimate that it will give 400,000 square feet of lumber. The bidding started at $25,000 and kept lively until the sum of $56,000 was reached. The bank here withdrew its reserved bid and the berth was knocked down to a city gentleman representing Mr. Klock of Aylmer. Not a great many years ago this berth could have been purchased for less than one-tenth the amount received to-day.

THE PAST SEASON.

Shanty foremen and others interested in the trade, who return from the Upper Ottawa, report the past season to be a very successful one in lumbering operations. The snow kept at a good height. There was no scarcity of labor and as a result the output of timber will be fully as large as last year. Nearly all the shanties have by this time broken up and everything is in readiness for the spring drive. Every train from the east during a short time past has had on board large gangs of river men, *en route* for the shanties to bring down timber.

Ald. Whelan, manager for Mr, J. Rochester, to-day stated that lumbermen entertain some fear that the water in the rivers and streams this spring would not reach that height that would be desired, but thero is no danger, however, but that the bulk of the timber will be navigated down to the mills and markets. The weather this spring for tho most part has been warm in the day timo and cold at night and consequently the snow has greatly run off.

SAW MILLS.

The repairs to the saw mills here which have been carried on during the winter are about completed, and it is expected that the majority of them will start their saws in motion for the season next week. This is a littlo earlior than usual, but there is a sufficient supply of logs in the ponds to keep them going until the fresh ones come down. Owing to the somewhat depressed condition of the market, it is believed that many of the mills will not run at night.

A HANDSOME MILL.

Mr. E. B. Eddy's new mill, erocted on the site of the onc destroyed in the large conflgration last fall, has been completed and is pronounced one of the most handsome structures of the kind in the Dominion. The walls are of stone, and largo, substantial timbors have been used in the fitting up of tho interior. The roof is oval in shape, different to all the other mills here. The exterior of the mill has been painted in flashing colors and presents a handsome appearance. The latest improved machinery has been put in and the sawing capacity will be larger than the previous one. which cut nearly 80,000,000 feet last season. This new mill will be the first to start in this vicinity, beginning on Monday next.

NEW VESSELS.

Three years ago not a steamer of any dimension could be seen on Lake Temiscamingue. Since that time a small fleet has been placed on it by different parties. Mr. Allen Grant is now building another schooner to ply on the same water this season for freighting purposes.

TORONTO.

From Our Own Correspondent.

APRIL 23.—Trade by carload is dull at present; owing to the tardiness of building operations this spring the yards are holding larger stocks than is usual at the opening of the season. The winter of 1881-2 continued so open that building went on with little diminution during the ontire year, and, as a consequence, retailers found their yards nearly depleted on the opening of the summer. This state of affairs is now entirely reversed, wholesale dealers have continued shipping to this market nearly through the entire winter, and retailers continued purchasing, and now find themselves with full stocks, and wholesale men find it difficult and up hill work to sell on the local market. This glut will, however, be only temporary, and with the advent of fine weather and good roads business will once more resume its wonted activity. I would here remark that there is no overstock in dimension bill stuff, that is still difficult to obtain in sufficient quantities to meet present demands. The surplus is mainly in stock boards and sidings; 2x4 scantling, 12 ft. to 20 ft., and joisting 18 ft. to 24 ft., is still in demand, and no glut in the shingle or lath trade. Mill men seem to have devoted their entire attention to the wants of the American market, which is mainly confined, so far as trade from here is concerned, to strips, stocks and good sidings, 1 in., 1¼ in., 1½ in., 2 & 3 in.

The docks have now their wonted signs of activity and bustle. Four vessels have left for Oswego up to time of writing this letter, taking away with them over 100,000 feet of lumber, and the diffierent railroad companies will soon be taxed to furnish cars to meet the wants of their customers; indeed the Midland Railway Company are now employing their box cars in the lumber trade, and it is difficult to obtain G. T. R. cars sufficient to meet the demand of the western trade, as all the lumber shipped over the Midland railway for points west of this place have to be transferred to the G. T. R. cars on their arrival here. This is extremely inconvenient for shippers on account of the delay and extra expense involved by handling. But the Midland Company excuse themselves on the plea that they have not sufficient rolling stock to allow their cars being sent so far from their own jurisdiction. The same excuses are made by the different railroad companies from year to year, and no apparent steps taken to remedy the evil, although credit must be given to the Midland Company for the exertions made by their officials to forward the lumber over their road as rapidly as possible.

Prices at the yards remain the same as last quoted you, and no downward tendency to be noted.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 50
" " " 28 ft	19 50
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 00
Three uppers, Am. inspection	35 00@45 00
B. M.	
1¼-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	3 00
Sawn Lath	3 00

OSWEGO. N. Y.

From Our Own Correspondent.

The demand since our last has been very slack; buyers are holding off in anticipation of lower prices when lake and canals navigation get fairly opened. We have had only one arrival of lumber so far; stato canal will be very late opening this season; the weather is too cold to admit of work being done speedily. No change in prices.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

CHICAGO.

The *Northwestern Lumberman* of April 21, says:—Probably the amount of lumber actually called for on country orders since April 1 has not been as large as for a corresponding timo in March, though the quantity shipped thus far this month does not fall below the average in March. There is much diversity of opinion in the district about the current demand, some asserting that it has seriously fallen off since the first of April, while others report a brisk demand fully as good as in March, which all acknowledge to have been a month of heavy trade. It is noticeable that the jobbers take the gloomier view of the situation, while the manufacturing dealers express great satisfaction about the volume of business doing, and predict great things for the future. Setting aside the views of both wings of the trade, we have sufficient testimony of facts to prove that the demand for lumber is good, and that the current outward movement is fully as heavy, and probably heavier than it was last year at this time. Several houses, whose veracity is unquestionable, report a larger aggregate shipment this month thus far than in April 1882, and they are among the largest shippers in the district. While some of the jobbers may be passing through a period of dullness as respects their individual yards, others of the same wing of the trade are having all they can do to keep up with their orders. It is a fact that several houses that are to remove their yards have been able to almost entirely clean off their foundations, and will not be obliged to wagon a stick to their new locations. When such a thing as that can be done, even at a moderate concession in prices, it shows what might safely be called a sweeping demand, for it has been capable of performing thorough broom work in a number of yards. It is furthermore noticeable that all over the district the sky is breaking in, where, as late as February, the tall piles obscured the vision. An immense depreciation in the amount stock has taken place since March 1, as anybody can see who is familiar with the district. Several of the larger houses report shipments this year up to the present as considerably in excess of a like period last year. On the whole, wo may conclude that the season has started out well for the lumber business, and that the requirement for the entire year will be considerable more than for any previous one in the history of the Chicago lumber trade.

Receipts, and stock on hand of lumber, shingles, etc., for the week ending April 19, as reported by the Lumberman's Exchange:

RECEIPTS.

	Lumber.	Shingles.
1883	1,731,000	399,000
1882	32,498,000	14,058,000

FROM JANUARY 1, 1883, TO APRIL 19, 1883, INCLUSIVE

RECEIPTS.

	Lumber.	Shingles.
1883	34,715,000	23,399,000
1882	180,395,000	69,624,000
Inc		
Dec	180,680,000	46,255,000

STOCK ON HAND APRIL 1.

	1883.	1882.	1881.
Lumber	412,007,038	279,324,096	332,491,234
Shingles	147,062,179	115,263,625	125,648,264
Lath	43,686,338	20,518,306	83,338,899
Pickets	3,497,232	3,802,011	1,589,064
Cedar posts	113,482	145,335	79,857

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₩ M	$57 00@64 00
Pine, fourths	53 00@57 00
Pine, selects	48 00@52 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 20@00 21
Pine, 10-in. boards, 16 ft., ₩ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	45 00@47 00
Pine, inch siding, common	18 00@20 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	35 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of April 21, says:—There is a fair steady demand for general lumber, and the tone of the market is quite well sustained, with a continued good outlook for business. Pine holds its own both for western and Canada. Yellow pine is in good demand. Spruce is in request, with the mills in Maine and New Hampshire very busy on orders. The

trade in hardwoods holds along about even, with a fair demand and steady prices on choice aud desirable lots.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

GLASGOW.

The *Timber Trades Journal* of April 7, says: The quantities on hand at present, of the various descriptions of wood goods, are comparatively moderate. The consumption of Quebec log timber during the past three months amounts to about 13,000 logs pine and 3,500 logs oak, elm, and birch, which as compared with corresponding period last year shows an increase in pine of about 3,500 logs, and in hardwoods a decrease of 1,600 logs.

The quarter's consumption of pitch pine apparently amounts to 7,600 logs, and the import during same period has been three cargoes—3,033 logs. There is still a considerable stock on hand. The stock of Quebec yellow pine deals consists principally of 3rd quality, the quantity of 1st quality being comparatively small.

AUCTION SALES.

On 3rd inst., at Glasgow, Messrs. Farnworth & Jardine, of Liverpool, brokers:—

A cargo of Mexican (Minatitlan) mahogany, consisting of 365 logs, msg. 06,794 sale feet (the import of Messrs. R. B. Watson & Co., merchants, sold at an average of 7 9-32d. per foot prices ranging from 5½d. to 1s. 2d.

Messrs. Singleton, Dunn & Co., thereafter sold by auction the undernoted deals, &c.:

Quebec 1st yellow pine deals—
12 ft. 11×3 2s. 8d. & 2s. 8½d. per c. ft.
12 " 10×3 2s. 6d. "
12 " 9×3 2s. 5½d. "
12 " 8×3 2s. 4d. "
" 2nd spruce deals—
9 to 11 ft. 10/16×3 } 11d.
15 & 16 " 9×3 }
20 logs chestnut (473 cub. ft.,) 1s. 5d. "
8 logs hickory (450 ") 1s. 9d. "
Oak planks 11 to 21½ ft. 12×5 at 2s. 0½d. "

Following the above Messrs. Edmiston & Mitchells sold a parcel of 75 American black walnut (17¾ in. av. square), at 5s. 1d. to 7s. averaging 5s. 11d. per cub. ft. also 17 logs at an average of 5s. 9d. per c. ft.

NOTE OF THE LEADING WOOD GOODS ON HAND AT CLYDE PORTS, 31ST MARCH, 1881, 1882, AND 1883.

	1883.	1882.	1881.
	Loads, 50 c. ft.		
Quebec waney boardwood	9,578	11,844	10,132
" yellow pine timber	9,839	15,981	18,887
" red pine	3,716	5,311	6,733
" oak logs	5,809	4,330	4,114
" elm	1,691	3,409	2,726
" ash	241	502	63
Birch, all sorts	17	364	644
Pensacola pitch pine, hewn	4,639	9,382	8,127
" " " sawn	8,587	10,157	5,539
" " " planks	242	1,659	1,603
Demerara greenheart	207	440	1,038
	St. Pet. stds. 165 c. ft.		
Quebec yellow pine deals	2,616	2,426	5,566
" red "	123	191	638
" spruce deals	830	167	221
Lower Port spruce deals	384	477	575
" pine "	350	475	375

LONDON.

The *Timber Trades Journal* of April 7, says: We hear of no sales of magnitude having been done as yet in first open water goods, but we understand these have been distributed to a considerable extent amongst coast buyers in a quiet way that betrays there is rather more business doing than appears on the surface—a sort of undercurrent of activity, which will show its effect on stocks later on, when we shall probably find that shippers have not been having such a quiet time as circumstances led us to imagine. Gefle prices have undergone little or no alteration; but whether this had reference to the best class of goods, or was only on inferior shipments, we are not in a position to say. The probabilities are that it was for a modified specification, or upon goods with a second rate character that the concessions referred to would be made, it being hardly likely, in the face of the determination come to amongst the leading producers to cease forest operations, and which has already been put into effect, that the best Sundswall or Soderham houses would, without some general consent, lower their prices, while those at Gefle were so firm.

Of course it depends entirely on the state of the trade here whether values will be maintained or not; already we hear accounts of improvement, and in several directions the dulness so universal in most branches has been stimulated by the fine dry weather of the past few weeks, which is now having the expected effect on outdoor operations: these are now beginning to show signs of real activity, and the next fortnight will probably decide the tone of the market in respect to cargo prices, at any rate, for the spring shipments.

LIVERPOOL.

The *Timber Trades Journal* of April 7, says: The past week has been a quiet one so far as the amount of business done in sales to the country is concerned, the demand having fallen off in nearly every article. This a state of matters somewhat unexpected, as most people recently were of opinion that, with the easy condition of the money market and the favorable turn in the change of the weather, building operations would exhibit much more animation, and consequently there would be a corresponding degree of liveliness in the timber trade. These anticipations, however, have not only not been borne out by the course of events, but the reverse has occurred, and this too in the face of moderate stocks of nearly all kinds of building timber. With the exception of Norwegian prepared flooring, of which ample supplies have come forward freely, the stocks on the spot are much upon the same footing as those of last year, which were regarded as being light.

In addition to this, the continued scarcity of sailing tonnage is making itself felt more acutely every day, and owners of vessels are holding out for advanced rates of freight, especially from the pitch pine ports and from Canada—in fact, greatly enhanced rates have been paid for the former; but though some advance has been made in sales on a cost, freight and insurance basis, it has not been equivalent to the increased cost to the shipper.

The price of spruce deals does not advance as one would naturally expect it to do looking at the moderate stock held in first hands in Liverpool, nor does there appear to be any strength in the demand from the country districts and large manufacturing centres.

On Wednesday Messrs. Farnworth & Jardine offered a cargo of St. John, N. B., deals, &c., say about seven hundred St. Petersburg standards, but about one-third was withdrawn, as the auctioneer declined to sell at the prices bid for some of the sizes. The chief buyers were the local merchants, though a few lots were knocked down to bidders from adjacent towns. The prices realized were for—

		£	s.	d.		£	s.	d.
16 ft. and up	3×11	8	0	0				
12 " to 15 ft.	3×11	8	0	0				
9 " " 11 ft.	3×11	7	10	0				
16 " and up.	3×9	7	12	6				
12 " to 15 ft.	3×9	7	10	0				
9 " " 11 ft.	3×9	7	5	0				
16 " and up.	3×7	7	0	0	to	7	2	6
12 " to 15 ft.	3×7	7	0	0	"	7	2	6
9 " " 11 ft.	3×7	7	2	6				
4th quality deals all sizes		5	10	0				

The Northwest Trade.

The newspapers of Monitoba latterly mention that building has begun early, and is being prosecuted with much vigor in all the towns of the province. The prospect is that this season will be unprecedented for building in the Canadian Northwest, both in the towns and on farms. Immigration is large, and promises to increase as the season advances, while railroad building will be actively carried on. Though the Lake of the Woods district and the Selkirk mills will supply a large portion of the demand, and considerable lumber will no doubt go over the Lake Superior and Canadian Pacific route from Georgian Bay, yet it is hardly possible that the supply will be ample and continuous enough without a supplement from the American side. It is probable that Minneapolis, Duluth and Northern Wisconsin mills will this year contribute to the aggregate of lumber that will be needed in Manitoba and the Northwest territories.—*Northwestern Lumberman.*

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

CHERRY has pretty well superseded black walnut for fine house finishings, and now another rather neglected wood is coming to the front. This is cedar. Cedar land all over the country is looking up and becoming more valuable. The demand for cedar has increased in value enormously within a few years.

THE export of white pine from New York for the first three months of the present year has been larger than for several years. Although it is at present reported dull, there is a healthy movement, and that with a good volume. When a falling off follows marked activity, dealers are ready to call it dull.

MR. J. D. SILCOX, contractor for the new dry dock, Collingwood, to the construction of which the town gave $25,000, has resumed the work with good prospects of an early completion. Large gangs of men, teams and masons are at work, and every effort will be made to have the dock ready for business by the 10th of May next. When completed this dock will be the best on the lake. It is 320 feet long by 60 feet wide, has a gate entrance of 50 feet in width, has a depth of 14 feet over the mitre sills. Its bottom timbers will be laid on a rock foundation; it is located in the inner harbor and is easy of access.

A CORRESPONDENT of an exchange thinks it unnecessary to have three boxes for the arbors of circular mills. His experience has taught him that three boxes are a nuisance; that the connecting piece between the boxes is apt to come in the way of the driving belt and have to be cut away. The less complicated a machine the better, and two boxes, if they are good long ones, are all that is necessary. The writer thinks the bearing for an arbor carrying 50-inch to 60-inch saws should not be less than 12 inches long. He adds: "A great deal of machinery is ruined by neglect, by letting the bearings get dry, bolts getting loose, and left to run in this condition until it is past care, where one moment's attention in time would have saved the whole."

FITS EPILEPSY

OR

FALLING SICKNESS

Permanently Cured—No Humbug—by one Month's usage of Dr. Goulard's Celebrated Infallible Fit Powder. To convince sufferers that these powders will do all we claim for them we will send them by mail, **post paid, a free Trial Box.** As Dr. Goulard is the only physician that has ever made this disease a special study, and as to our knowledge thousands have been **permanently** cured by the use of these **Powders. We will guarantee a permanent** cure in every case **or refund you all money expended.** All sufferers should give these powders an early trial, and be convinced of their curative powers.

Price for large box $3.00, or 4 boxes for $10.00, sent by mail to any part of the United States or Canada on receipt of price, or by express, C. O. D. Address

ASH & ROBBINS,

20L24 **360 Fulton Street, Brooklyn, N. Y.**

THE *Lumberman's Gazette* says:—As an indication of what some of the up river operators are doing in the line of hardwood, we note the fact that R. J. Birney & Co., of Saginaw City, have purchased during the winter something over 2,000,000 feet of hardwood logs, of which three-fourths are ash and the balance white maple, basswood and rock elm. They have purchased also some very choice cedar logs, which will be manufactured into boat stuff and shingles. The logs will be manufactured at the Briggs mill on the middle peninsula, between between Saginaw and East Saginaw.

THE *Insurance and Real Estate Society* says that Prince Arthur's Lauding is an excellent point for the manufacture of lumber for the North-West; already Mr. Thomas Marks has erected a large saw mill at the south end of the O'Brien property, and several other saw mills, plauing mills, sash and door factories are contemplated. Lumber can be made here for the Winnipeg market far more advantageously than in the States, as the duty is avoided and the freight is much less. Business in this line can be extended indifinitely, as manufacturing of houses in sections, of furuiture, and all kinds of wooden-ware would be most profitable.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

THE KEY TO HEALTH.

BURDOCK BLOOD BITTERS

Unlocks all the clogged avenues of the **Bowels, Kidneys and Liver,** carrying off gradually without weakening the system, all the impurities and foul humors of the secretions; at the same time **Correcting Acidity of the Stomach,** curing **Biliousness, Dyspepsia, Headaches, Dizziness, Heartburn, Constipation, Dryness of the Skin, Dropsy, Dimness of Vision, Jaundice, Salt Rheum, Erysipelas, Scrofula, Fluttering of the Heart, Nervousness and General Debility;** all these and many other similar Complaints yield to the happy influence of **BURDOCK BLOOD BITTERS.**

Sample Bottles 10c; Regular size $1.

For sale by all dealers.

T. MILBURN & CO., Proprietors, Toronto

THE ENGLISH MARKET.

Jas. Smith & Co.'s Liverpool wood circular of April 3rd, 1883, says:—The arrivals since our last have been 42 vessels, 21,182 tons, against 20 vessels, 14,781 tons, in 1882and 17 vessels 12,624 tons in 1881.

FROM 26TH JANUARY TO 31ST MARCH, 1883.

	Vessels.	Tons.
Quebec	..	....
St. John, N. B., &c	4	3,843
United States	6	5,001
Baltic	40	17,530
Total	50	26,374

FROM 26TH JANUARY TO 31ST MARCH, 1882.

	Vessels.	Tons.
Quebec	..	.....
St. John, N. B., &c	7	5,829
United States	24	19,676
Baltic	15	8,649
Total	46	34,154

FROM 26TH JANUARY TO 31ST MARCH, 1881.

	Vessels.	Tons.
Quebec	1	921
St. John, N. B., &c	4	3,734
United States	28	19,468
Baltic	6	1,993
Total	39	26,106

The import during the month (save one item, prepared flooring) has been small, and helps to strengthen the market, which has been weak and languid all the year. Latterly a better feeling has taken place, and now that the holidays are over and fine seasonable weather prevailing, a more encouraging state of things should be exhibited in the general trade of the country, and the wood trade may then fairly look for an improvement, especially as stocks cannot be considered otherwise than very moderate. The plentiful supply of money and the continued low rate of discount, 3 per cent., does not augur much demand for trade purposes. Freights are much the same as last month, although an increased demand would quickly advance rates.

COLONIAL WOODS.—Yellow pine timber: The sales have been small, all from the yard, and of a retail character. Around the coast contracts have been made more freely. Red pine has been in fair demand. Ash: No sales reported. Elm: The stock is light. Walnut: The stock is light of Canadian, and good large wood commands full prices. Birch maintains its value, and the stock is the smallest for some time past. Oak: The stock is light, with a fair demand, especially for planks, cut to sizes; the sales have been of the latter, at 2s. 9d. per foot for prime, and 2s. 1d. to 2s. 3d. for inferior quality anc specifications A cargo is now landing and not yet sold. N. B. and N. S. spruce deals: There have been no fresh arrivals; a cargo of Nova Scotia, to arrive, has been sold at £7 5s. c. i. f. to an outport. The consumption here has been rather below that of the same time last year, and the stock is larger than last year's, which was unusually light as compared with former years. The only sales have been at auction of St. John, viz, ex-Governor Langdon, averaging £7 11s. 3d., and ex-Marabout, at £7 10s., ex quay, which shows a slight improvement. Quebec pine deals: The stock is being reduced, there has been an increased demand, and full prices obtained. By auction, a few 1st quality Three Rivers, 3x10, realized £21 per standard, and 2nd quality, long lengths, 3x11, £17 per standard; a parcel of 3rd quality has also been sold, the price of which has not transpired. Quebec staves: Pipe have changed hands at £95, and puncheon at from £23 10s. to £25 per mille. Palings and laths are asked for.

PAPER AND ITS USES.

The great diversity of uses to which paper pulp has been heretofore put has prepared us for almost any statement in regard to its application. We have been informed of paper boxes, paper barrels, and boots; paper floors, ceilings and siding, paper car wheels and rails; and paper dishes, pails, and other furniture that were hardly prepared for the statement that paper chimney shafts were among the possibilities of this almost universally applied material: Perhaps says an English exchange there never was before in the history of mankind so outrageous a violation of preconceived ideas as is embodied in the sentence, "Paper Chimney Shafts." The name is sufficient for a tolerable joke, yet in Breslau a shaft has been erected fifty feet high of paper pulp which has been chemically impregnated so as to resist combustion. Paper has been put to some extraordinary purposes, but we think the use of paper for chimney shafts surpasses all."

The limit to which paper pulp may be used in the various industries has by no means been reached. For several years the most expensive and safest car wheel has been made of this material, using a steel tire. Houses are being built on western prairies of "lumber" made of straw pulp. Railroad bars of the same material are seriously proposed, and now comes along a lively German scientist and makes the stuff fire-proof, and build a chimney of it. Next came ovens, heating furnaces, stoves. Should this development proceed as alll others, it will materially effect the iron trade. The materials for paper pulp—worthless woods and straw—are most abundant and cheap. The limit to its use could hardly be affected by the lack of stuff to make it.

Stocks in England.

The *Timber Trades Journal* says:—All colonial goods continue less in stock now than they were a year ago at similar date, and this state of things will probably remain till the first open-water cargoes put in an appearance, which is not likely to occur for some considerablo time yet. The same with regard to pitch pine; stocks are still light, being about 17,000 pieces, against 45,000 last year. The stock of prepared boards, including the recently arrived cargoes, a portion of which have not been taken into stock, does not come up the stock in hand last year by about 400,000 pieces, a not very considerable difference, and which the next returns will probably more than make up. The open winter 1881 and 1882 kept the stocks of flooring from diminishing to any considerable extent during the dead season, but though this winter has been far from a severe one, still there was sufficient frost in the Baltic to close the ports at the usual time, and thus check the importation to this country.

Pliable Wood.

The London *Timber Trades Journal* in its account of the recent Building Trades Exhibition, describes the following as among the curiosities:—There is the Pliable Wood Company, whose stand is deserving a passing notice. They put a card into your hand, with their address printed on it, which is a pure veneer, tougher than pasteboard but with the color and grain of the wood plainly showing, and which is flexible without splitting or cracking. Rather a curiosity than an eligible visiting card, perhaps, but showing to what uses wood can be turned in case of need. They claim too that their process is *indestructible by fire*—that is, it may be assumed, not liable to take fire by anything short of a welding heat. All their preparations of wood take a high French polish; and they exhibit specially pressed match boarding, of various woods, for ceilings, partitions, passages, stairs, &c., rendering lath and plaster unnecessary.

IN a recent sitting of the German Parliament the Bill for raising the wood duties was referred to a committee by 136 votes to 135.

THE *Timber Trades Journal* of March 31, says:—It is satisfactory to see that prices have been so well maintained in the north. The sales at Glasgow and at Leith last week indicated considerable firmness in the market, as nothing appeared to be sacrificed, and some goods fetched romunerative prices. Sixty feet avorage Quebec yellow pine timber averaging over 85s. per load must be considered a fair sale; but 3rd Quebec yellow deals at about £9 for regular sizes was not so good. Pitch pine, while pulling down the prices of the old favorites, does not do much for the importer even in Glasgow. 1s. 4d. per foot is equal to 66s. 8d. per load; from this deduct 42s. freight, and 21s. first cost; there is 3s. 8d. left to pay insurance, landing charges, dock dues, auction fees, discount, &c., before the importer can look for a margin. In Liverpool this commodity is doing rather better just now. There is a large demand, but the supply is too incessant to admit of any material advance of price.

LUMBERING BY LIGHTNING.

THE *Northwestern Lumberman* says:—The part that electricity will play in the lumber business is a thing unknown. At present it cuts no figure except for lighting mills; but with its unlimited possibilities, its use may be much more extended. Just now electric motors are commanding attention. It is claimed that the cost of such a motor is small in comparison with steam engines, and that they can be made to weigh considerably less than the common engine. Perhaps a light motor may be just the thing for the logger to haul logs over a light track. Felling trees by electricity has been tried, and although it did not prove a success, there is no reason to despair. That logs will be cut and hauled by electric apparatus is not improbable, and no one can say that electricity will not yet be the power that will run saw mills. In fact, the day may come when a good share of the lumber business will be run "by lightning."

Railway Freights.

The *Northwestern Lumberman* says:—There is a growing feeling in Mississippi that the legislature should take in hand railway matters, and seek to equalize the freight rates. It is thought that an effort will be made to that end at the coming session of the legislature. If by any means the lumbermen along the lines of railroads could ship their common lumber it would be greatly to their advantage. As it is now, millions of feet of such lumber are piled at the mills, with the probability that it will lie there until it rots. A mill man recently offered 1,000,000 feet to a gentleman for $3 per thousand, and the offer was not accepted. It would find sale if it could only be shipped. Any quantity of it could be bought at from $3 to $6 dollars per thousand, nearly every mill having 1,000,000 feet or more of it on hand.

A Large Fir Tree.

The following letter appears in the *Timber Trades Journal*:

SIR,—I sometimes see in the *Journal* reference to large or historic trees, and, thinking it may interest some of your readers, I send the following particulars of a large Pinaster I have cut into planks this week. The tree standing was near 100 feet high of measurable timber. The butt length of 21 feet cut three 12 inch planks containing from 60 to 65 feet cube each. Two of them are excellent planks, as clean as 1st yellow pine. The grain of the wood shows rapid growth, the color is bright red throughout. I suppose it would be difficult to match these planks in English-grown wood, the dimensions being 21 ft. x 3 ft., 6 in. x 12 in., all square. —I am, yours truly,

S. SCORET.

Steam Saw-mills, County Wharf, Northam, Southampton, March 22nd, 1883.

A TIMBER raft has gone to pieces in the gale at the mouth of the Edisto River, S. C., and three raft tenders have been drowned.

A LINE of lumber vessels will be put on this season between Thompson, near Manistique, Mich., and Chicago. They will run in the interest of the Delta Lumber Company, whose mills are at Thompson.

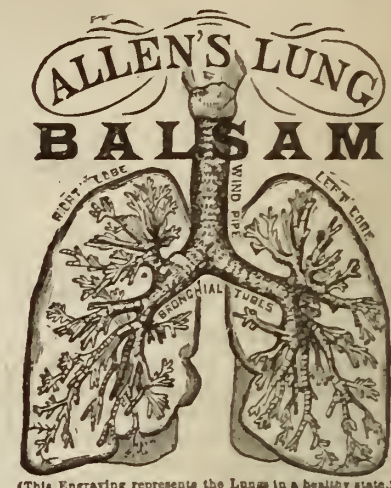
On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

BURDOCK BLOOD BITTERS cures scrofula, erysipelas, salt rheum, piles and all humors of the blood. Cures dyspepsia, liver complaint, biliousness, constipation, dropsy, kidney complaints, headache, nervousness, female weakness and general debility, when used in time.

HEADACHE.—Headache is one of those distressing complaints that depends upon nervous irritation, bad circulation, or a disordered state of the stomach, liver, bowels, etc. The editor and proprietor of the *Canadian Presbyterian* was cured after years of suffering with headache, and now testifies to the virtue of Burdock Blood Bitters.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine.



(This Engraving represents the Lungs in a healthy state.)

THE REMEDY FOR CURING

CONSUMPTION, COUGHS,

COLDS, ASTHMA, CROUP,

All Diseases of the Throat, Lungs and Pulmonary Organs.

BY ITS FAITHFUL USE

CONSUMPTION HAS BEEN CURED

When other Remedies and Physicians have failed to effect a cure.

Recommended by PHYSICIANS, MINISTERS AND NURSES. In fact by everybody who has given it a good trial. *It never fails to bring relief.*

As an EXPECTORANT it has no Equal.

It is harmless to the Most Delicate Child.

It contains no OPIUM in any Form.

☞ Directions accompany each bottle.
☞ For sale by all Druggists.

PERRY DAVIS'

VEGETABLE

PAIN KILLER.

This celebrated Medicine is recommended by Physicians, Ministers, Missionaries, Managers of Factories, Workshops, Plantations, Nurses in Hospitals,—in short, everybody, everywhere who has ever given it a trial.

TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

The PAIN-KILLER is sold by medicine dealers throughout the world, Price 20c., 25c., and 50c. per bottle.

BAXTER'S MANDRAKE BITTERS.

THE ONLY VEGETABLE CURE FOR

DYSPEPSIA,

Loss of Appetite,
Indigestion, Sour Stomach,
Habitual Costiveness,
Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit, President.

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MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH, GALT.

Messrs. R. H. SMITH & CO., ST. CATHERINES.

JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ., PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

LL

VESSELS PREPARING.

The Toronto *Mail* of April 20, has the following among its shipping notes :

The Dundee is still fitting out. She is going to load lumber in a few days.

The Rutherford has finished unloading, and will take in a lot of lumber, probably, in a day or two.

The Bruno, which sailed on Wednesday, carried square timber, and not deal boards, as was reported for her deck load.

The Sarepta has been fitted up, and is taking in a full load of lumber for Oswego at $1.30. She will run out just as soon as she can, it may be to-day or to-morrow.

The Mulvey is taking in 250,000 feet of lumber at the northern, and will finish up to-day for Oswego. She is run out by her owner, Captain Hall, who says the rate is $1.25.

The tug W. T. Robb, owned by Captain Hall, is being fitted up at the Northern, and will do duty on the rafts now getting ready near her berth. There is little to be done on her but to light the fires.

Captain Maw is putting 290,000 feet of lumber in the Jessie Drummond for Oswego. He will sail to-day, if business does not detain him. He is taking this cargo at a dollar and a quarter and on his next trip will look for more.

The Snowbird is loading lumber at the Northern railway docks, Captain Baird, better known as Andy, still sails her. She has been chartered by Mutton, of Toronto, to carry 100,000 feet of lumber for Oswego, which she takes at $1.30. This is an advance on the opening and is a fair price. A safe voyage and quick return for the little craft is the wish of many.

TIMBER PERMITS.

In the House of Commons on Monday April 23, Mr. McCraney, in moving for a return showing the names of all persons to whom permits have been granted to make timber, ties, telegraph poles and saw logs within the district of Rainy lake and river and Lake of the Woods and tributary streams, from July, 1880, to July, 1882, advocated the system of disposing of timber limits by public auction. He read extracts from newspapers commenting on the Government administration of timber lands, and also a letter in which it was stated that the Government had sold timber limits for $5 per square mile to parties who had resold at $2,000 per square mile.

Sir. Hector Langevin thought the hon. gentleman had acted unfairly in prejudging the case before the Government was permitted to bring down the papers. Not only had he done so, but he proposed to confine this inquiry to two years under the present Government, without extending his investigations into any portion of the time when the late Government were in power. If the papers were to be of any use they should cover the whole period during which the timber licenses had been granted. He, therefore, proposed that the motion be amended so as to call for returns of all permits and licenses granted with territory to date.

Mr. Hesson thought the letter read by the mover of the motion should be laid on the table so that the name of the writer could be made public.

The motion as amended was adopted.—*Mail.*

PATTERN LUMBER.

Says the *Mechanical Engineer* :—"The pine is the tree of the pattern-maker—not any pine tree however. He leaves that of Georgia and Oregon to the carpenter for his heavy framework. The stair-builder or joiner may even find uses for these strong and tough woods. He (the pattern-maker) looks to it that his lumber is soft, light in weight, clear and straight in the grain. A gnarled and knotted stick is an abomination to him, but a straight plank is his delight. His views are met, his wishes fulfilled, in the best selected pine of Michigan. How beautiful the freshly re-sawed planks of this wood appear, in color a very light pink, with a knot seldom seen. Its appearance foretells its quality ; the shavings come long and silky from the truing plane, leaving a surface as glossy as satin. Across the grain it is not refractory, and endways it will cut like cheese. So excellent is the quality of this lumber that pattern-makers demand, and receive it, in all parts of the World, from London, England, to San Francisco. Many kinds of wood are used for patterns ; practically, however, there are but two kinds, hard and soft wood. The question is, when shall we use the one or the other. Pine, or soft wood, is used for large and heavy patterns and for small ones, provided there are no cross-grained part, which from their thickness, or from being unbraced, are unable to stand the process of moulding. Stock patterns, expected to be in use for a number of years, are made of hardwood, to retain the sharpness of their outlines. For very small work hard wood is always to be preferred, because in bringing such work to size and shape, very light cutting has to be performed, and the hand is guided in a measure by the resistance felt in using a tool."

LUMBER FOR MANITOBA.

The following letter appears in the *Mail* :—

SIR,—Our attention has frequently been directed to the small quantities of lumber brought here from Ontario by people moving to this country ; and while one of our firm was at Brandon last week we asked our manager there if he knew how much the lumber was costing when brought from Ontario by the emigrant, and were astonished to learn that it was costing from $3 to $10 per M. more than the current selling prices at the yards at Brandon.

It would seem that the idea has been quite prevalent throughout Ontario and the eastern provinces that the prices charged by merchants in the North-West were exorbitant, *i. e.*, that exorbitant profits were charged, and it seems that no notice has been taken of the keen competition that exists in this country, so keen that merchants find it difficult to get a paying margin of profit, and exorbitant profits are the exception and not the rule.

As lumber is one of the first articles of necessity for the new settler here, we give the prices at present asked by the dealers in lumber at Brandon :—Sheathing boards, $28 ; common boards, $32 ; scantling, 16 ft. long and under, $33 ; drop siding and flooring, $35 and $39 ; shingles, $3.75, $4.50, and $5.50 ; lath, $5.75 ; doors, 2′ 6″ x 6′ 6″ x 1¼″, $2.25 ; 2′ 8″ x 6′ 8″ x 1½″, $2 ; sash, glazed, 8x10, 12 lights, $1.75 ; 10x12, 8 lights, $2 ; 12x24, 4 lights, $2.50 per window ; building paper, tarred or brown, 4½ cents per lb.

The foregoing shows the prices asked for small quantities, and represents about the requirements of the ordinary settler. We shall feel obliged if you will kindly publish this in the columns of your paper, and would also ask you to direct attention to it.

For the accuracy of our statements and responsibility we would refer you to the managers of the Merchants' Bank of Canada and Bank of Ottawa, Winnipeg.

Yours, &c.,

Winnipeg, April 17. BOYD & CROWE.

YOUNGS' POINT.

SHINGLE MILL.—The shingle mill is now in thorough working order. Strong new belts having been put in last week. Mr. W. J. Kearn's intention is to cut first class shingles, and to be second to none in the market ; that is his motto.

THE DRIVES.—Mr. Chalmers intends to send back his foreman and two gangs of men to drive the logs that were cut last winter. Mr. Alex. Wynn goes back to Eel's Lake and brings his logs logs and timber down Eel's Creek into Stony Lake. Mr. P. Cassidy with his gang of men brings out his logs down Jacks Creek into Stony Lake. We wish both foremen lots of water in the creeks, no heads winds, &c.,

LUMBER AT SEA.

The New York correspondent of the *Northwestern Lumberman* says :—Some of the lumber and timber-laden vessels from the south with yellow pine have met with severe gales and narrow escapes from shipwreck. Some quantities of lumber have been lost from the decks, and some of the incoming crafts look as though they had been gone on a Rip Van Winkle voyage. The schooner Seth W. Smith, with lumber, came into the harbor April 9, steered in a highly original manner. A plank had been rigged to be used as a temporary rudder, that important part having been knocked to pieces in a gale, April 3. At that time about one-half the deck-load was washed overboard. She was 11 days on the way from Savannah, and six of those days heavy gales were raging. Other trading vessels have suffered more severely. One with sugar came in last week with the rigging all lacking, as it had been swept away during the storm. The sailors were gald to get to port with their lives, and held a sort of jubilee while being towed up the harbor.

REVIEWS.

THE FORESTS OF ENGLAND.—We have received a very interesting little work "The Forests of England, and the Management of them in bygone times," published by Oliver & Boyd, Edinburgh, and Simpkin, Marshall & Co., London. It is written, or chiefly compiled, by John Croumbie Brown, L. L. D., Professor of Botany in the South African College, Capetown. The author laments the paucity of works on forestry in England as compared with the cartloads of volumes in other languages. This work deals in a very interesting and instructive manner with the subject of the ancient forests of England, chiefly in relation to their history and law, but we are glad to learn that it is likely to be followed by other hand-books on subjects relating to forestry.

THE EDISON LIGHT.—Mr. Thos. Swinyard, of Hamilton, Ont., has published a pamphlet containing testimonials as to the advantages of the Edison Electric Light. These are in the form of answers to a series of questions, and give a very favorable report. They are from such establishments as the New York *Herald* office, and a number of leading mills, factories, hotels, &c. We learn that a charter and patent rights for Canada have been obtained, and we hope that shortly a factory for the construction of the machinery will be added to the other industries of Hamilton.

ON THE INTERCOLONIAL RAILWAY.—A. H. Dixon, of Toronto, has published, for the Intercolonial Railway, a beautiful illustrative work entitled "Pleasant Places by the Shore and in the Forests of Quebec and the Maritime Provinces, *via* the Intercolonial Railway." It is a most artistic production, even the cover being an art gem, and the numerous illustrations are beautifully drawn and engraved. The author, W. Kelly Reynolds, describes in a most attractive manner the beautiful scenery and other leading features of the districts in question. Such a publication should prove a strong inducement to tourists to select this route for their holiday excursions or even for a longer stay.

THE Flint & Pero Marquette is running eight log trains, and hauling about 7,000,000 feet daily. The company has contracts to fill that will keep them busy at this rate until July. A large force of men is work on the Harrison branch extension.

THE *Lumberman's Gazette* says :—Great scarcity of lumber all through Dakota. Common lumber sells at $28 per thousand, with a dozen buyers for every board there is for sale. At many points household goods are sitting by the railroad track, with no material to make houses to shelter them or their owners.

THE Belleville *Ontario* of April 23, says: During the past seven days 47,615 cubic feet of square timber have been loaded at Hastings on Grand Junction cars for Mr. Thos. Buck and brought to this city. During Saturday alone 6,867 cubic feet of this timber were loaded on 13 cars, being an average of 527 5/13 feet per car. This work is done under the supervision of Mr. W. J. Butler, who is a "professional" at the business.

THE Montreal *Gazette* says :—The market has presented no very important changes since our last report, a good local demand existing for hard and soft wood at firm prices. An enquiry also is experienced for pine and several kinds of hardwood on American account. Advices from Winnipeg state that some heavy building contracts have just been concluded, and we hear that some large sales of lumber have been made at $24 to $28 per thousand feet.

THE Menominee Indians, in Shawano county, Wis., last winter banked between 5,000,000 and 6,000,000 feet of logs. The logs put in by them a year ago brought $10 a thousand.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to business, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

"GRUNT IT OUT."—The above is an old saw as savage as it is senseless. You can't "grunt out" dyspepsia nor liver complaint, nor nervousness if they once get a hold. They don't remove themselves in that way. To take a few doses of Burdock Blood Bitters is better than "grunting it out." What we can cure let's not endure.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

$500 Reward !

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w46d12L22

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EXTRACT OF WILD
STRAWBERRY

Cures Cholera, Cholera Morbus, Dysentery, Cramps, Colic, Sea Sickness and Summer Complaint ; also Cholera Infantum, and all Complaints peculiar to children teething, and will be found equally beneficial for adults or children.

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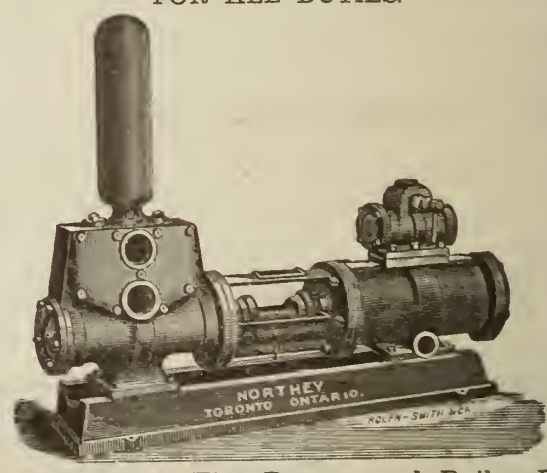

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The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

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Recently a large party of Norwegian wood choppers arrived on the steamship Illinois at Philadelphia. They are under a contract with an extensive firm of Minneapolis to work among the forests of Minnesota.

The contract for supplying lumber to the Montreal Water Works' Department has been awarded, says the *Star*, to Messrs. Henderson, who get $40 per thousand feet for deal, as against $37 last year, and 14 cents per foot as against 11 cents last year for tamarac.

It is stated from Berlin, under date April 13, that the Committee of the German Parliament to which the bill for raising the wood duties was referred has read the Government proposals a first time by 11 against 10 votes, after agreeing to a motion for reducing the tax on timber used in mines and rejecting a proposed decrease in the duty on cask staves.

THE Toronto *Mail* says that about 800,000 feet of square timber will come down the Midland Railway to Toronto this spring, and be rafted in the bay. A large number of cedar piles are being brought down this road, and being cut on land that has never been cut over before, are of a superior quality. These will be used at the new breakwater at the Island.

COSTLY CABINET WOODS.

"The demand for fine wood," said one of the members of a well-known Centre street firm, is "increasing every year. The finest and costliest is French walnut, which, by the way, is not French at all, but is a product of Oriental countries. It grows in Persia, Circassia, and Asia Minor. You have seen it in veneering upon costly furniture, but you probably have no notion how expensive it is, nor how careful we are to prevent waste in its use. Come into our workrooms and I will let you see it in process of cutting."

He led the way into some extensive rooms, where ponderous machinery was revolving and heavy chains rattling. In one room steam rose from cracks in the floor.

"Down there," said the gentleman, "is a pit where we lay large and valuable logs and subject them to the action of steam until they become almost as soft as butter. Then we take them out, fasten them to an iron beam (here he led the way into another room), and this beam revolves around a finely tempered knife, of the same length as the log."

With each revolution, a strip of wood was shaved off smoothly, and laid in piles upon the floor like skins of leather or sheets of paper.

"Every time this beam turns around it moves a fraction of an inch nearer to the knife. The whole apparatus works with extreme precision. No printing press or weaving machine is made with greater nicety. The knife that shaves off the sheets of wood is rigidly immovable, and ground to a razor-like edge. The heavy beam that revolves with its great load of timber is firmness itself, and is regulated like clockwork. The slightest tremor in the beam or knife would break and twist the thin sheets that you see turned off here with the regularity and perfection of nowspapers turned out by the printing press. These sheets are about 1-120 of an inch in thickness, but frequently we shave off veneers as thin as 175 to the inch."

He lifted a corner of one of the long sheets, and it seemed to be about the thickness of ordinary writing paper. The wood was warm and pliable.

"It is only in this condition that this shaving process is possible. When fresh from the steam pit the knife slips easily through it. Were the wood cold and hard, the process would be impossible. Even if the knife could do the work, the sheets would be too britle, and would crumble into small fragments."

"For what purpose are these extremely thin sheets used ?"

"The veneers used upon furniture are, as a rule somewhat thicker than these that we are now turning off. The thinnest veneers are used on picture frames They are as thin as the finest tissue paper, and must be backed with ordinary paper attached with paste to prevent the glue by which they are fastened to the body of the frames from showing through. These veneers are also used to a large extent in the same way that wall paper is used—for covering the walls of rooms. Besides this, there are many other and novel uses to which they are put. A short time ago somebody conceived the idea of having business cards printed upon them, thinking that the novelty of the material would cause people to preserve the cards."

"Do you ever saw logs in such sheets?"

"Sometimes, but rarely, with the more expensive woods. Sawing involves a good deal of waste. For the cheaper woods it is sometimes more desirable, as it is not necessary to go through the steaming process when we use the saw, but there is a great difference in the number of sheets that are turned out in that way. The most that we can get by sawing is twenty-five to the inch."

"What is the value of the French walnut?"

"I have seen it sell as high as $2 a pound. At the Paris Exposition for 1878 one burl was sold for $5,000, and its weight did not exceed 2,200 pounds."

"What is a burl?"

"This is a trade expression, and means the large and tough knots or excrescences like warts that grow upon the trunk of the tree. The French walnut is a small tree, crooked and dwarfed in its growth, that grows, as I have stated, in Asiatic countries. Its value is confined entirely to these curious, tough, and contorted bumps that grow upon it. The trunk itself is of little or no value. You have often noticed the singular grain that French walnut has, if grain you can call it. The fibres and tissues seem to be twisted into the most singular and complicated figures. The intricacy of these figures, combined with their symmetry, is one of the elements that determines the value of the French walnut burl. Color and soundness are other elements of value."

"Does the burl play the same important part in mahogany and other valuable woods that it does in the French walnut?"

"There are rosewood and mahogany burls, but, unlike those of the French walnut, they are of little or no value. In those woods it is the trunk of the tree that is prized, the knots are discarded."

"How do other woods compare in value with the French walnut?"

"Next to French walnut ebony is probably the most valuable. Occasionally a fine piece is found that brings even a better price than the French walnut. Not long ago I saw some that sold for $350 a ton. For a particularly large piece, even $5 a pound might be paid. In ebony the main thing is size. It is difficult to get large pieces that can be used without cutting. Rosewood and mahogany are always in demand. The best mahogany is that of San Domingo. Next come the mahoganies of Cuba, Honduras, Mexico and Africa. There is much less difference in value between different mahoganies and rosewoods than between different specimens of ebony and French walnut. Fair rosewood will sell in the log for 5½ to 7 cents per pound. French walnut can occasionally, if poor, be bought as low as three cents per pound, but the finer burls will sell for hundreds of dollars. Burls worth from $500 to a $1,000 each are not rare. I recently bought one myself for $1,200, and I think I shall make it pan out $3,000. We must be very careful, however in buying these burls. Their value is often greatly lessened by the existence of hollows, sometimes in the very heart of the wood, the result of decay or malformation. These hollow places are filled up by fradulent dealers with a substance that is made to resemble the genuine wood, and they will then sell the burls as sound. Manure, compressed to the requisite degree of harduess, is much used for this purpose. Worse even than this is the practice to which such knaves sometimes resort of placing stones in the hollows to increase the weight, for the burls, as I have already intimated, are sold by the pound. This fraud is liable to cause serious damage to the valuable knives that are used in cutting the veneers."

"How about our native woods? Do you deal much in them?"

"Yes, to some extent; but for choice cabinet work the foreign woods are, of course, more highly prized. Burls in ash and maple, are plentiful and cheap, selling for two to four cents a pound. Black walnut burls command a higher price—ten to twelve cents a pound—but they are getting scarce. Yes, the demand for choice cabinet woods is constantly increasing. In the houses that the wealthy are now putting up, the fine wood work constitutes a large item in the expenditure. Look at these veneers for table covers. These handsome designs and this artistic ornamentation are all mosaic work, made by piercing together small fragments of woods of different colors, or inserting them in the body of a large sheet that constitutes the background. To one not acquainted with this work it would look like a drawing on wood; but turn the sheet over and you see the lines run through. You can get these veneers for fine tables at most any cost. You can get one as low as $25, and you can have designs put together at as high price as you may care to pay."

"Are there many dealers in such woods in the United States?"

"The number is very small, but the business large and the competition keen. One of our firm makes frequent trips to Central America and elsewhere to look for rare specimens of cabinet wood. These trips have their attractions, but they are not infrequently accompanied by hardships and danger."—*N. Y. Sun.*

NEW ENGLAND DEALERS.

The lumber dealers of New England held a meeting at the Falmouth Hotel, Portland, recently, their object being to make uniform living prices for lumber for building purposes. There were present prominent dealers of Maine, New Hampshire, Vermont and New York. It is proposed to raise the price one dollar per thousand. At the evening session the following officers were elected: President, F. A. Pitchie; Vice-President, A. S, Brown, of Whitefield, N. H.; Secretary and Treasurer, David Birnie, Portland, and a board of five directors. A constitution and by-laws were adopted. A reporter, in conversation with one of the heaviest lumber manufacturers, learned the principal reason for calling the present meeting and the results which are expected to be accomplished. The gentlemen state that the past has been a very hard winter, with a great fall of snow; the cost of labor and supplies has been heavier than usual. For these reasons it is said to be a fact that it has cost a dollar a thonsand feet more than it did last winter to get the spruce to the mills. On the other hand the prices of manufactured lumber are lower, if anything, than last year, and less than the manufacturers can afford to sell for this season. During the season so far there has been little demand for building spruce, but there is much building in prospect duriug the summer, and there is every reason to expect a large demand soou.

LUMBERING IN DAKOTA.

The following items come from Grand Forks, Dakota:

Since the opening of the new survey—less than a week—75,000 acres of land have been filed upon at the land office.

Mr. Frank Howard, of Ann Arbor, Mich., is in the city with a view to ascertaining the degree of success that might be anticipated if a $100,000 saw mill were to be erected here. He represents Michigan capitalists and says that he will agree to build a $100,000 saw mill and purchase the logs now offered for sale by W. T. Walker, if the city of Grand Forks will come forward with a $50,000 bonus. It will be necessary to invest at least $500,000 in the enterprise, and Mr. Howard says that he can give the assurance that the work would be commenced at once. He says that Mr. Walker asks twice too much for his logs, and that the reason he (Mr. Walker) doesn't run them down to Winnipeg, as heretofore, is that the Canadian Pacific railroad is interfering with his business.

The Red Lake river is admirably adapted to driving logs. On the east side of the Red Lake is timber to the amount of 8,000,000 to 10,000,000 feet of lumber and on the north side the amount of timber is too great to estimate. The logs offered for sale by Mr. Walker are floated down the Clearwater river, which enters the Red Lake river at Red Lake falls, and come from Mr. Walker's land, which lies between the Whitearth and Red Lake Indian reservations. They are good logs and are guaranteed to average 33½ per cent. of clear lumber.—*Lumberman's Gazette.*

HINTS FOR TRANSPLANTING.

We take the following from the circular of the Quebec Commissioner of Crown Lands in regard to the public Arbor Day:

1. Choose trees for transplanting from the skirts of the woods (as much as possible) where they have not been crowded.

2. Do not take them over eight or ten feet in height, except with very special care.

3. Do not grudge the time necessary for taking them up well, with a good ball.

4. In doing so, try and preserve as many rootlets and radicles as possible, rather than big roots. The success, in planting, depends upon the preservation of those rootlets and radicles (through which the water in the soil and various mineral elements in solution are taken up and conveyed, as food, to the tree.)

5. Be very careful not to allow those rootlets and radicles to dry up; shelter them from the sun and wind the moment they are extracted from the ground, and try and keep them fresh with damp moss or otherwise.

6. Trim up neatly the tap root and all the broken ends of large roots, with a slanting cut of the knife, (it will give more surface for the formation of rootlets.)

7. If the large roots are much shortened in extracting the tree, the branches ought to be somewhat shortened, or the roots may not be able to supply food in sufficient quautity for the head, and the tree will suffer.

8. Make the hole for transplanting wider and deeper than the ball of the tree, and partly refill it with good mellow soil; it will give a better chance to the rootlets and radicles, for an immediate start.

9. Do not allow stagnant water in your plantation; if the soil is liable to get overflown, provide for its drainage.

10. Do not replant the tree any deeper than it originally grew.

11. Turn it to the same points of the compass as it originally stood; it appears a good precaution, and an easy one to take (by means of a compass and a string tied round the tree, with the knot to the north.)

12. Spread the roots, rootlets and radicles carefully, pack up between them with fine mellow earth and water before closing the hole.

13. Stake the tree, two stakes will generally do, place them so that they will steady the tree against the prevailing winds; tie with straw ropes, or surround hard ropes with straw, so as not to injure the bark.

14. Keep the ground free from grass and weeds and prevent it hardening at the foot of the trees.

15. Fence strong enough to keep away cattle.

16. The qualities of the soil in which trees are to be replanted, must be carefully considered in selecting the trees.

For rich, deep, mellow soil, moderately damp, take butternut, oak, elm and black walnut.

Maple and basswood will, of course, do admirably well in such excellent soil, but a soil presenting the same qualities, in a less degree, will give very good results for those two kinds of trees, they are more accommodating.

Ash will do well in cold rather damp compact soil, where maple would not grow.

Tamarac grows well in low wet land, provided the soil is not too compact.

Dry sandy soil ought to be reserved for pine and spruce.

N. B.—The period fixed for "Arbor Day" has been chosen withe regard to deciduous trees. In the Province of Quebec, pine and spruce succeed better when transplanted later, about the beginning of June, when the buds are on the point of opening.

GENERAL REMARKS.

It is generally admitted that the cheapest and safest mode of cultivating forest trees is by sowing their seed.

There will be less check in the growth if the seed can be sown at once where the tree is destined to remain permanently.

But it is not always practicable to do that, ground may not be ready, may not even have been decided upon, &c.

In that case, sow in seed beds and rear up seedlings in nursery.

The season for sowing black walnut, butternut, oak, basswood, sugar maple, acer negundo, is in the fall, the moment the seed is ripe.

Soft maple and elm ripen their seed about the middle of June, and it ought to be sown at once, quite shallow, sheltered from the sun and moistened.

Sow fir tree seed in the spring.

Until the nurseries are sufficiently advanced to provide trees fit for transplanting, get them out of the woods, observing precautions indicated above.

Those who do not wish to sow their own trees can procure seedlings at wonderfully low rates from the nurseries.

THE MANITOBA TRADE.

A correspondent of the *Northwestern Lumberman* writes as follows:—

WINNIPEG, April 18.—The lumber business here is in a demoralized condition, and the prospects for a profitable season's business are not of the best. There are further south of us a number of parties who seem to want to do business for pleasure, not profit. Last year prices were maintained that left a good margin for handling, and very little cutting in prices was done unless on large bills, when some slight concessions were made. The trouble this season arose something in this way: In February the city council advertised for tenders for 1,500,000 feet of plank for sidewalks, to be delivered free on board cars here. Amongst those sent in were Woods & Co.'s, a new firm here, for $24.88 per thousand, and one of J. C. McDonald for Little, Peck & Co., of Duluth, for $24.95. The board of works recommended that the tender of Woods & Co. be accepted, but when it came before the council to be ratified it was referred back to the board. In the meantime McDonald wrote a letter to the council offering to take the lumber off the car and pile it in his yard and deliver it to the city as required. This meant a saving to the city of fully $1 per thousand. His offer was accepted, but the contract was never signed. Within the past week J. R. Sutherland & Co., a local mill firm, offered the city all it wants at $24, and D. E. Spraggan, another local mill man, not to be underbid, offered the same at $24 in his yard, or delivered in any part of the city at $25.25. Last season the city paid for the same grade $30 per thousand, so that this is a very big cut. Joist and scantling, up to 16 feet, sold all last season for $30, but a cut of from $2 to $4 is being made now, and the same all through the list. No. 2 common cannot be placed in yard here for less than $26.50 to $27.50, so that those dealers who have to buy in St. Paul and Duluth will have to sell at a loss. Of course these local mills can sell at these prices, but it cuts the margin very fine. Their logs cost them here $16 per thousand, log measure; but labor is high, and quite a number of logs are lost, so it runs up cost. Later on in the season, when business gets opened up, dealers may see the folly of cutting prices, but as there is a very heavy stock to come from Lake of the Woods region, and this is the only market, they have prospects that are not any too cheering. —*Felix.*

PACIFIC COAST LUMBER INTEREST.

Californians, not content with forcing their way to the front rank as wheat shippers, are beginning to turn their attention to lumber, and are seeking markets where their different varieties of native and Pacific coast wood are likely to be appreciated. Redwood, fir, black walnut, cedar and white pine are available in unlimited quantities, having stood for ages unaccustomed to the assaults of the hardy and persistent woodsman; and it is with a view of introducing these and many other varieties of finishing woods, that capitalists intend entering the field as competitors in eastern and foreign markets. Redwood has been in use here for some time, but builders generally are not fully acquainted with all its merits. It is used for many purposes, rough as well as fancy work. It is lasting, worked up either into shingles or for paneling purposes with a high polish. Recently a shipment was made from San Francisco to Glasgow of Washington Territory red fir, cedar and black walnut, and an assorted cargo of woods followed to London. The scarcity of the lumber supply in many portions of Europe offers an excellent opportunity for Pacific coast shippers, and with their known energy, it would not be a surprise to see, at the expiration of a few years, shipments of lumber making from San Francisco and North Pacific ports to Europe as frequently as wheat goes now. At the present time shippers are not fully posted as to the requirements of European consumption, the cargoes forwarded thus far being of an experimental character, simply with a view of ascertaining the tastes. The ventures made in the way of shipments to Panama and other South Pacific ports, have met with such encouragement, that the trade of Montevideo and Buenos Ayres in white pine is now viewed with some jealousy. Australia is buying largely in the San Francisco market for building purposes, and the demand is rapidly increasing. Canada and the West, keep a good lookout for your trade! or some fine day you may awake to the fact, that instead of a prospective famine in lumber, it may turn out a feast, with a surplus to spare.—*Lumber Trade Review.*

NORTHWESTERN PROSPECTS.

The fact that what is called coarse lumber at Saginaw valley points is selling for from $1 to $1.50 per thousand lower than last fall's figures, while what is called good lumber is reported to be selling fully as high as it did last year, is of some significance. It may be taken to mean that the coarser grades of stock throughout the country that draws a large proportion of its supply from eastern Michigan, must rule lower this season than they did last year, for after the mills start up an advance in the value of general stocks cannot be looked for. The concession already a fact at Saginaw points, and the acknowledgement made in western Michigan that green lumber must sell this year at least 10 per cent. below last season's prices, coupled together, certainly indicate a lower range of values all along the line. The information of a break at Winnipeg, conveyed in a letter printed in this issue, shows that there is a powerful competition for northwestern trade, in which Minneapolis, Duluth, Lake of the Woods and the local mill men of Manitoba are engaged. The antagonistic attitude of the yard trade and the cargo market in this city, and the rivalry between Chicago and Mississippi river points for the Kansas, Nebraska and Colorado business, thrown into the devil's broth with the other difficulties, will help the bears of the trade at large in their schemes. Taking everything into consideration, the outlook is a little dubious for the sticklers for last year's prices. Nothing but an overwhelming demand can stop the tendency to weakness; but we must acknowledge, at the same time, that there is a probability that the demand will come very near the overwhelming. But a relentless competition of sections, and an unprecedented output of lumber, are certain to characterize the season's business, and it is a question as to whether the requirement of lumber will be sufficient to withstand these two adverse influences.—*Northwestern Lumberman.*

A PETRIFIED FOREST.

The visitor to the petrified forest near Corrizo, on the Little Colorado, will begin to see the signs of petrification hours before he reaches the wonder; here and there at almost every step in the road small pieces of detached limbs and larger stumps of trees may be seen almost hidden in the white sand. The road at a distance of ten miles from Corrizo enters an immense basin, the slope being nearly a semi-circle, and this enclosed by high banks of shale and white fine clay. At the entrance of this semi circular basin the exploring party camped and a fire was quickly burning. The meal consisted of bacon, beefsteak and coffee, after partaking of which the party camped for the night. In the morning it only required half an hour's good driving to reach the heart of the immense petrified forest, and then such a wonder met our gaze as no one can ever realize until they make that very trip for themselves.

The petrified stumps, limbs, and, in fact whole trees, lie about on all sides, the action of the waters for hundreds of years has gradually washed away the high hills round about, and the trees that once covered the high table lands now lie in the valley beneath. Immense trunks, some of which will measure over five feet in diameter, are broken and scattered over a surface of three hundred acres. Limbs and twigs cover the sand in every direction and the visitor is puzzled as to where he shall begin to gather the beautiful specimens that lie within easy reach. There are numerous blocks or trunks of this petrified wood that have the appearance for all the world of having been just cut down by the woodman's axe, and the chips are thrown around on the ground so that one instinctively picks them up as he would in the log camps of Michigan and Pennsylvania.

Many of the small particles and even the whole heart of some trees have now become thoroughly crystalized and the beautiful colored cubes sparkle in the sunshine like so many diamonds. Every color of the rainbow is duplicated in these crystals, and those of an amethyst color would pass the eye of a novice for a real stone. The grain of the wood is plainly shown in nearly every specimen—making the pieces more beautiful than ever.—*From the Albuquerque Journal.*

THE *Timber Trades Journal* of London, England, in allusion to the attempted amalgamation of the Grand Trunk and Canadian Pacific Railways says:—"The timber trade will perhaps be better promoted by the separation of these two great lines of railway than by their union. Monopolists are less likely to consult public convenience than those who have to contend with a little wholesome opposition. To facilitate the timber traffic they will have to go on an approximation to the penny postage system, or inland telegraphy, which take no note of distance. From its great bulk, in proportion to value, ordinary timber, like coal, will not bear accumulating charges, by length of way. Our railway companies have not yet recognized this fact, hence the Manchester ship canal."

THE Wiarton *Echo* says:—We are informed that Messrs. Bible and Chisholm are erecting a new saw-mill at Stokes Bay, which will be completed in a few weeks. They are putting in a powerful engine and first-class machinery, which will have a capacity of about 1,500 ties per day. The firm have a contract to supply the W., G. & B. division of the Grand Trunk with 160,000 ties. The settlers of the Peninsula will have no trouble to dispose of their cedar at good rates. At Bible and Chisholm's mill in the Township of Lindsay, on Tuesday, the 10th inst., 1,024 ties were sawn in the short space of ten hours, under the management of Mr. S. Lownsbury, the head sawyer. The ties were all large ones, and no more than two were cut from the same stick. This is extraordinary work, as 500 is considered a day's cutting.

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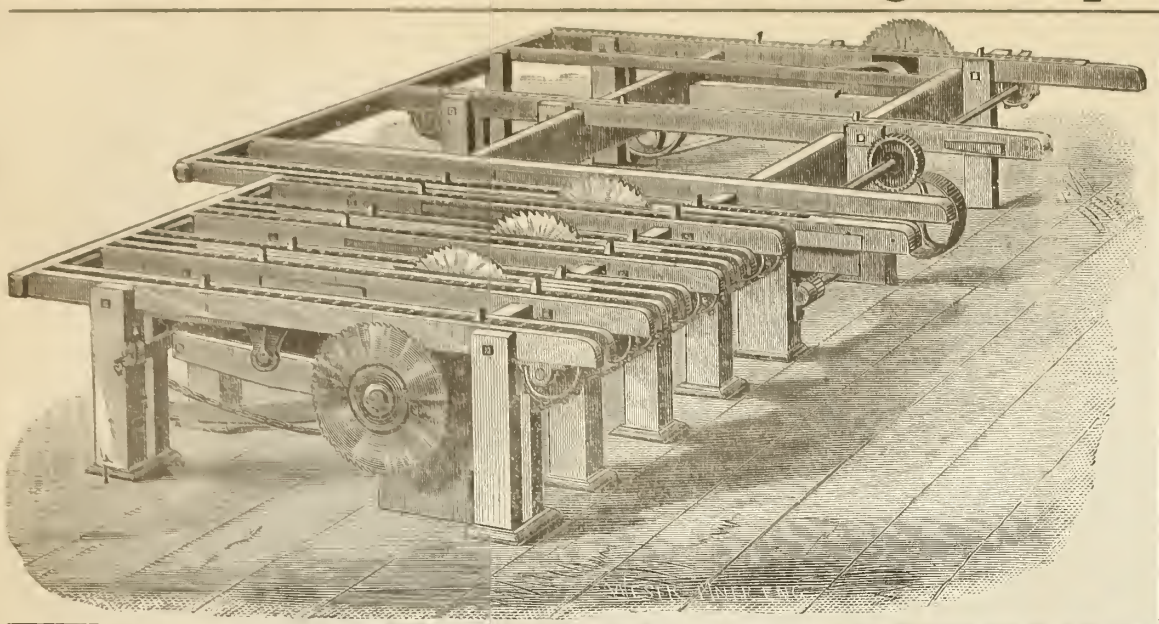

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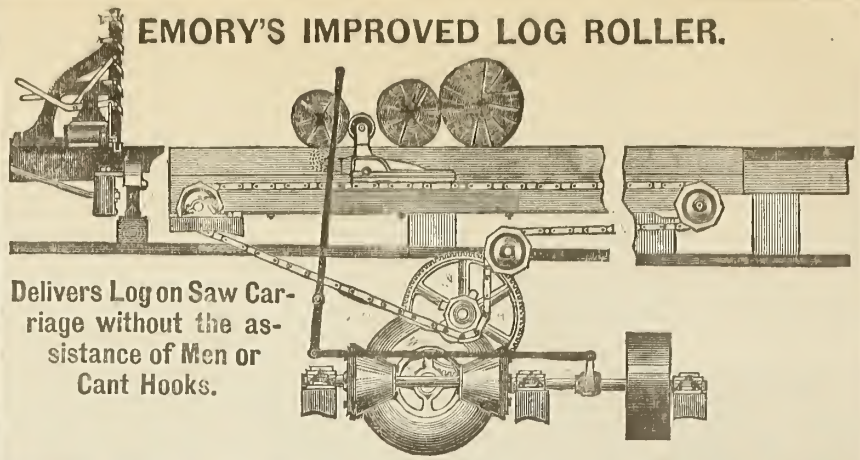

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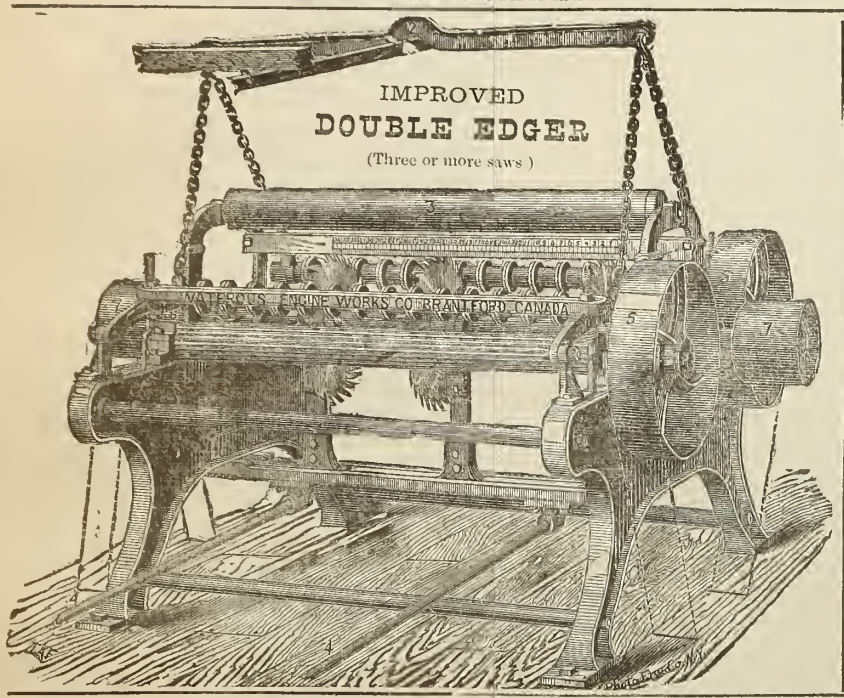

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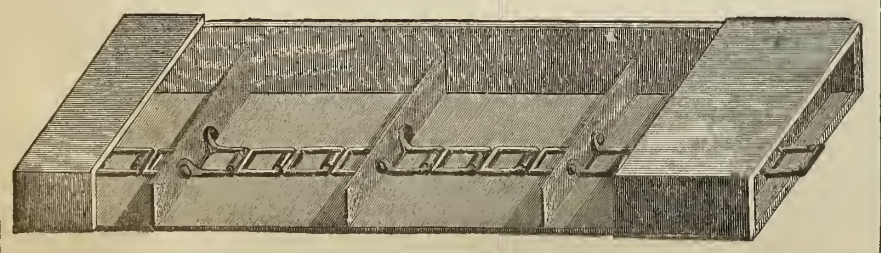

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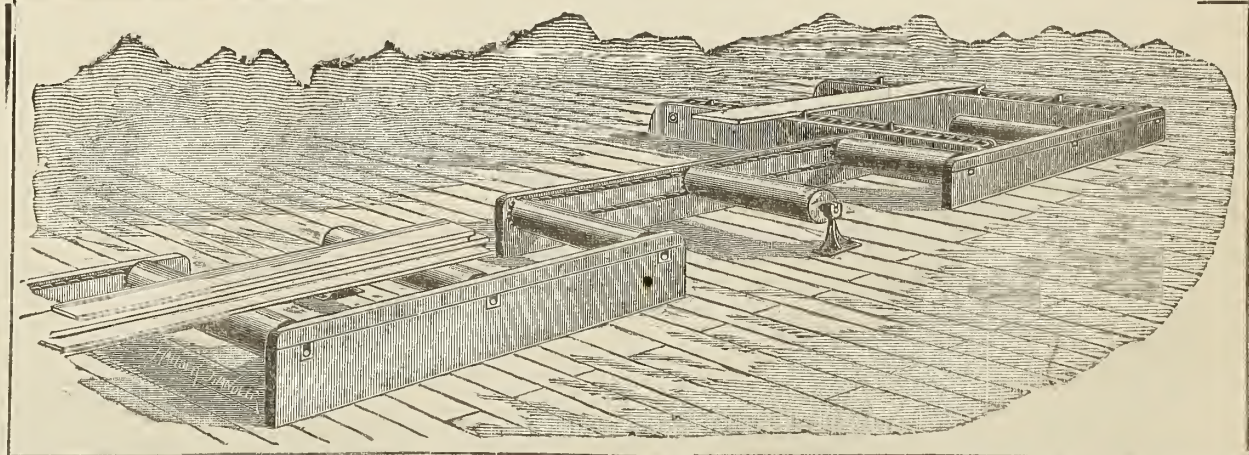

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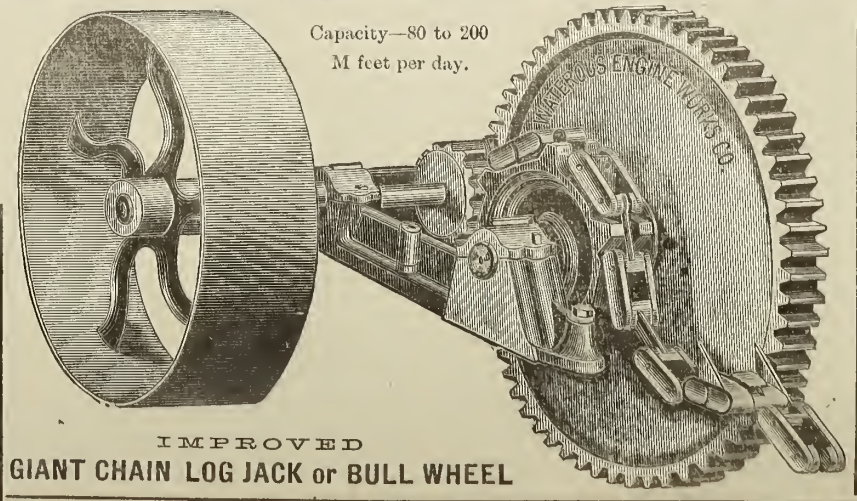

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NORTH DAKOTA'S LUMBER.

"The lumber interests in northern Dakota did not cut much of a figure till the year 1877, when the tide of immigration set in this direction, said Mr. Shotwell, of Fargo, a few days ago. "The lumber used prior to that time was principally confined to building up the small towns and claim shanties. In 1877 Fargo was then, as now, the prineipal city in northern Dakota, and during the year about 4,000,000 feet were used here. Tho surrounding country consumed about a like quantity. Since that year there has been a steady and large increase in the demand for lumber, both for farm implements and for the building up of towns and villages that have sprung up along the lines of the Northern Pacific and the St. Paul, Minneapolis & Manitoba railroads. It is estimated that in tho year of 1882 Fargo alone used 25,000,000 feet of lumber. A vast quantity was used in other towns toward the west and in the Red river valley. It is impossible to form any sort of an estimate of the quantity used."

"The farmers did not begin to put up substantial permanent buildings in any great number till about the year of 1880. In 1877-8 good buildings were to be found on no farms but the 'bonanza' farms. The proprietors of these had an abundance of money with which to make all the improvements they desired. Since 1880 the smaller farmers have had good crops and have got fair prices for their products, and have been able to add to their buildings from year to year. They have built a better class of houses, barns and granaries than before. And yet, one who rides over the vast prairies of northern Dakota will be impressed with the fact that there are comparatively few farms that are even now well fitted up with buildings. The observer will be struck with the thought that a vast quantity of lumber has yet to be used

"The lumber business in this part of the country is still practically in its infancy. Our supply is obtained mostly along the line of the Northern Pacific as far east as Duluth. In the larger towns of northern Dakota, store buildings are being built to a great extent of brick. There is plenty of brick clay to be met with in different parts of the territory.

"Common lumber is now sold at different points in the valley for from $22 to $28 a thousand feet. Most of the dealers obtain their supplies from the mills along the line of the Northern Pacific road, but some of the larger dealers own their own mills. A lumber business needs some little capital to be carried on profitably and properly. Owing to the lien laws of the territory it is a very safe business to be engagod in. The contractor has a lien upon any building for the amount of his claim as against a third party or any incumbraneers in good faith for 90 days after the completion of the building. He has a lien also against the ownor at any time before the property changes hands. A sub-contractor that is a dealer who furnishes the contractor, has a lien against a building for the full amount of his claim if filed within 60 days after the last item is furnished.

"If a man desires to close out his lumber business through ill health or any other similar cause, he can do so without experiencing any material loss, as a stock of lumber, if well cared for, increases rather than decreases in value. It is about the only business that I know of where stock improves in value by keeping. The groceryman in closing out must of necessity lose on the original value of his stock for shop wear.

"There are excellent opportunities for lumber dealers to open yards at different small towns that are springing up along the line of the roads. This is especially tho case on the Fargo & Southwestern road, which is now building. The country along the road is rapidly filling up.

"It is not advisable for a man to start in tho lumber business without a fair amount of capital. If he has $5,000 he can carry a good stock. As in every other business, the more capital a man can put into it the more economically and satisfactorily he can carry it on. In Fargo one lumber firm has a capital of $100,000. The combined capital of the six firms in Fargo is probably about $200,000.

"Sales are frequently made of lumber amounting to from $1,000 to $7,000 in value. Those are likely to occur in small as well as large places. The counties all through north Dakota are using a large quantity of heavy timber for the purpose of building bridges across the numerous river that water the country. Houses are mostly plastered, and, of course, there is a large demand for laths."

"How will prices rule during the coming season?"

"About the same as last year. There was a tendency in a downward direction—at least before the logging season begun, we thought that prices would be somewhat lower, as the cut promised to be very large. But the small-pox got into the camps and the work did not progress as was expected, and prices will probably hold their own. The fall trade last year was light and a larger stock of dry lumber than usual is on hand. It was hoped that there would be a decline in prices of about two dollars a thousand, but it cannot be expected now. There will be more dry lumber this year than there was a year ago. This will be a boon to consumers."—*Lumberman's Gazette.*

CEDAR POLES.

The present season has showed a much increased demand for cedar poles. Chicago is the largest point for their distribution in the country, and probably markets half the poles that are cut. From the nature of the business, the domand being altogether with a certain number of telegraph and telephone corporations, a few parties control all the contracts. Up to four years ago, poles were received almost entirely by cargo, but since that time the practice of shipping large numbers of poles by rail during the winter has come in vogue. One large handler sold 125,000 poles during 1882, and up to date has handled 90,000 poles since January 1, and estimates that he will add 125,000 poles to the amount by the end of the year. He has received 400 car-loads this month, and 1,000 car loads since January 1. There will likely be 500,000 poles used in the United States this year. There are always a certain amount of repairs necessary that call for poles, and new telegraph lines, or extensions of old ones, require a large number. But the heavy increase in demand is chiefly on account of the numerous extensions of telephone systems all over tho country. Tho poles coming to this market are from tho white cedar forests of Michigan, Wisconsin and Canada; the South uses considerable red cedar from Arkansas and Tennessee: chestnut poles prevail in the East, and sawed redwood on the Pacific slope. The buyers of poles are few, and there is considerable risk and hard work in getting them out, tho effect being to keep the business almost entirely in the hands of old concerns. The supply is always regulated in advance by the requiremont. When the demand is good as now, with prospects of future heavy consumptien, the contractors spur up their agents to cut and buy largely, or to retrench whon contracts are slow. Prices are influenced variously by the existing circumstances. Poles received by rail cost more than when received by vessel. Poles 25 feet long are quoted at from 85 cents to $1.25 on cars in Chicago. Cedar poles are sold by Chicago handlers to go to any remote points, in all directions of the compass, as, for instance, to Arizona, Salt Lake City, Syracuse, St. Louis and New Orleans.—*Northwestern Lumberman.*

QUINZE PIER AND BOOM COMPANY.

Mr. Tasse moved in the House of Commons that the House go into committee on the bill to incorporate the Quinze Pier, Boom and Improvement Company.

Mr. White (Renfrew) said this was really a proposal to give two gentlemen, Mr. Allan Grant and Mr. O. Taggart, the right to construct works on a portion of the River Ottawa, which was declared by an Act of this Parliament to be a navigable stream. The portion on which these works were to be constructed was above Lake Temiscamingue, through which the timber from a very large extent of territory was required to pass. Although the names of five corporators appeared in the bill, they were practically only two, as the other three were men of straw in the employment of Mr. Grant, and were simply inserted to make up the number required to apply for an Act. He (Mr. White), did not believe it to be in the public interest, that the control of so considerable a portion of a river like the Ottawa should be placed in the hands of private individuals. He was informed that licenses had been issued to the extent of 1,200 or 1,500 square miles above the point where these works were to be constructed. It was stated that the works, power to construct which was asked by this bill, extended over 200 miles from the head of Lake Temiscaningue, though the interests of these two gentlemen did not extend over more than twelve or fifteen miles, or at the utmost twenty miles. He was strongly of the opinion that these works ought to be constructed by the Government, and he suggested that these two gentlemen could not be in any way damnified by postponing this Act for a year, and if the Government, upon examination and due consideration, should come to the conclusion that they would not be justified in improving that portion of the river, he would offer no objection next session to a charter been given for the purpose to these or any other gentlemen. If, however, the House should decide that the bill should pass, he would move in committee an amendment giving power to the Government to acquire the works when they thought proper.

Mr. Tasse said the promoters of this bill had deserved well of tho lumbering interest, as they had been the pioneers of the trade in that portion of the Ottawa Valley. He had letters from eight or ten of the most important lumbermen interested in that locality approving of the bill. He read extracts from letters from Messrs. Egan, D. Moore, Hisson, Allan Gilmour, Conroy, Dr. Church, Alex. Fraser and Richard Nagle. In committee he would propose to meet the views of his hon. friend from North Renfrew, by an amendment which would limit the operations of the promoters to an extent of thirty or forty miles. He would have no objection to the Government constructing the works if they were prepared to go on with them, but he did not suppose that they were at present. At all events he was prepared to accept the amendment giving the Government power to assume the works.

Mr. Bryson said he thought this bill was not in the public interest. This portion of the river required improvement, but the promoters of this bill were only two men who were lumbering near the Quinze Rapids. He suggested that the Government should send an engineer to make a report on that portion of the river, and if they were not prepared to improve it next year he would support the bill.

Sir Hector Langevin said the promoter of the bill had agreed to limit the operation of the bill to a small portion of the river between Lake Temiscamingue and the Lake des Quinze, where the petitioners had their works and their timber. so that the hon. gentlemen's objection on that ground would be met. He was not sure that the Government would undertake these works. Those on the Upper and Lower Ottawa now were not Government works, and he did not see why a company should not be incorporated to improve this portion. He thought it showed great enterprise on their part to do this without asking aid from the Government, and a clause was to be inserted giving the Government power to purchase the works at their value. The logs of the limit holders above Lake des Quinze would pass through these works and pay the tolls which had to be approved by the Governor in Council and might be altered by him at any time. The formal approval by the Governor in Council was also required of the character of the works, and the company would not be likely to construct them in an inferior manner, as the destruction of the works would be a great loss to them.

Mr. Blake suggested that the difficulty might be avoided by providing for the opening of stock books, so that all the limit holders would have an opportunity to attend to their own interest.

After some remarks by Mr, Dawson, the bill was read the second time.

The House went into Committee of the whole, Mr. Kilvert in the chair.

On the motion of Sir Hector Langevin, a provision was inserted that, "after one month's notice in the *Canada Gazette*, a book shall be opened at the chief place of business of the company in which any person may subscribe for shares in the said capital stock, and, in case a larger number than 500 shares shall be subscribed for, then there shall be an allotment of shares among the subscribers, so that no subscriber shall be excluded."

On the motion of White (Caldwell) a clause was added providing that "the Governor in Council may assume the works, or any portion of the works, on payment of the value to be fixed in case of disagreement by the Official Arbitrators of the Dominion.

The bill, as amended, was reported, read the third time and passed.

DESTRUCTIVE FIRES.

Michigan, it would appear, is not the only state in which the reckless destruction of timber is carried on. It is well known that in this state, Minnesota, and in fact in all the northern states which are recognized as timber furnishing states, the pineries, as well as some of the other timber bearing territory, are annually more or less devasted by fires which are in many cases the direct result of carelessness on the part of land-lookers, hunters, pioneer farmers, and others. A match, with which a hunter may have lighted his pipe, carelessly dropped, or the dying embers of a fire left by the land-looker, and fanned again into a flame by a passing breeze, or the charred remains of a burning log heap of the farmer, once more ignited by the bed of coals left thoughlessly to smoulder, or even the burning wad from the gun of the sportsman, may be the means of the destruction of thousands, yea, millions of dollars worth of timber, or perhaps worse, hundreds of lives, as in the case of the destructive fires of Michigan in September, 1881. But it would seem that this reckless carelessness and seeming indifferenee to the safety of life and property is not confined to Michigan and the other western and northern States, which have heretofore obtained recognition as the great lumber producing territories, but is obtaining a foothold in the southern states, which if not nipped in the bud, by stringent legislation, will, when the scenes of activity and the conversation of pine timber of the forests into lumber shall have been more fully transferred thither from the north and west, as it inevitably must be, in the not very distant future, be the most disastrous and direful in its consequences, and it therefore behooves the law making powers of these states, while the lumber business is yet virtually in infancy, to demand a halt in the reckless methods which have obtained a foothold. In alluding to this carelessness in a late issue, the *Southern Lumberman* says that "this abominable and and wasteful custom holds sway in certain sections of our country, and as the perpetrators of the outrage do not heed kindly admonition, it would be well for the legislature to pass a stringent law with reference to it and attach thereto a very severe penalty. We have frequently received letters on the subject and in answer to them published articles relating thereto but to no purpose. Trifling white men and negroes or thoughtless boys are the perpetrators of these deeds. To destroy thousands of young trees is to them a secondary consideration to driving a harmless rabbit from a thicket. Others again fire the wild grass in order to hasten a new growth, never thinking that the timber destroyed or badly injured by the process is worth many times more than the pasturage and the animals which feed upon it." It will be observed that the practices which prevail there, are not at all dissimilar to those which prevail in this state, and if not checked in the incipient stages, may yet prove as disastrous as they did in Michigan in 1881.—*Lumberman's Gazette.*

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on April 7th, says:—For the first time during the present year, I am happy to have to chronicle a decided improvement in the position of the Swedish sawn wood trade. Very considerable sales have been effected of the better brands of redwood from the ports south of Sundswall to the Continent, at prices about 10s. per standard less all round than first open-water figures 1882. The sales in question (and this is the most encouraging fea-

ture of the case) have been spread over a large number of small ports, instead of being confined to a few of the larger places. Beginning with Belgium, we find Antwerp the heaviest purchaser of goods of best quality, including planed boards. This port (which bids fair to eclipse all continental *entrepots* in the magnitude of its general trade) is, however, in an exceptional position, and forms the natural distributing point to which the great bulk of Belgian wood consumers look for the supply of their requirements. In the absence of any statistical information on the subject, and merely judging from observation, I am inclined to believe that no continental port has increased its wood trade so rapidly as Antwerp. Crossing to France, we find nearly the whole of the northern French ports have purchased fairly, with the exception of those supplying Paris, where the building trade appears to be entering on a stage approaching a crisis. Marseilles has bought freely, and the same is the case with Barcelona and the other Spanish ports on the Mediterranean.

The firms who usually confine the bulk of their business to Great Britain have apparently sold least, and it is to these importers they will have to turn for the further modification they so stubbornly insist on, as it is scarcely likely to be conceded by those who have sold so largely to the Continent. An advance of 5s. per standard on their March offers for red deals has been lately made by one or two London importers, but which were nevertheless declined as being still too low. A somewhat improved tone is also reported by exporters to be prevalent in the market for whitewood, although personally I have seen little of it, It may, however, with some degree of certainty be anticipated that the present improved tone will further develop as the conviction gets abroad that the opening of the ports will occur a month later than at one time expected.

Iron Columns *v.* Oak Pillars.

The following is from the *City Press*, London, England:—Perhaps when a few more tremendous blazes have destroyed thousands of pounds' worth of property and the buildings in which the goods have been stored, builders and architects will begin to ask themselves if slender iron columns and iron grinders are of any use in withstanding the ravages of fire. It is an undoubted fact, receiving confirmation daily, that iron is of little use when attacked by fire. It gets red hot and expands; cold water is thrown upon it; a sudden contraction takes place, and away goes the building. A sad example of this kind of destructive effect may now be seen in Rose Street, and Newgate street. Depend upon it good solid oak pillars and strong solid wooden floors are a better protection from fire than flimsy iron."

A Million's Worth of Timber Seized.

The Prince Arthur's Landing *Herald* of April 25 says that during the past winter the Section B company got out over a million dollars' worth of lumber in the disputed territory, for railway building purposes. They took out over 1,750,000 ties alone. But the company got no license from or paid the Ontario Government any money, and the latter have instructed their inspector of lumber at the landing, Wm. Margach, to seize all the ties and lumber in question. Mr. Margach took the train as far as Savanne, from which place he will take to the woods and seize everything that has been cut, posting up notices that anyone touching the materials will be arrested and dealt with as a person would be for stealing. His instructions are very emphatic, and he says that he intends carrying them out to the letter.—*Toronto World.*

Elm Logs.

Sir Leonard Tilley in answer to Mr. Smyth, in the House of Commons said that the Government had received petitions last session from residents of Kent, Ont., praying for an export duty on elm logs, and the Government took the matter into consideration, but did not see their way clear to grant the request. No petitions had been presented this session, and it was not the intention of the Government to ask Parliament this session to place an export duty on these logs.

SWEDISH STOCKS.

The drop on Swedish stocks since the first quotations were to hand may be generally estimated at between 5s. to 10s. on best goods, and 10s. to 15s. on the commoner qualities, due to the proportion of best being rather below than above the average quantity, and we do not anticipate that these will be further reduced, the likelihood being rather that an improvement will result when the general body of importers come into the market to supply themselves. A great deal will depend, of course, on the state of trade generally, irrespective of the particular branch this *Journal* represents, and that the almost unprecedented flatness so long prevailing is at length yielding to a more general tone of activity is noticeable everywhere; and if the present seasonable weather continues, this improvement in the spirit of trade will greatly assist the wood market, the supply of timber being dependent to a great extent on the general tone of prosperity prevading the country. If other trades are active the building trade can hardly be the reverse, and so with regard to the consumption of wood generally. When money is plentiful speculation will be brisk in all directions, and no lack of business in the wood trade need appear when confidence in trade is once assured.—*Timber Trades Journal.*

Sault Ste. Marie.

A scheme is incubating to convert the Sault Ste. Marie, between Lakes Superior and Huron, into an immense water-power, by constructing a flume from the head of the canal to a point below the village, thus securing a fall of 18 feet—enough to drive a multitude of mills. A bill has been introduced into the Michigan legislature to provide for the incorporation of a company to improve and control this water-power. It is proposed to build saw-mills, flour mills, and other manufactories at that point. Since the prospect is that the Northern Pacific will form a connection with the Canadian system of railroads at the Sault, why is not the scheme a good one? It might become an important manufacturing point of lumber, iron and flour, with shipping facilities by rail and water equal to the best.—*Northwestern Lumberman.*

What the World Heard in the Woods.

I have a corn—The oak.
I'm off my nut—The hickory.
These hands are clean—The palm.
I've got the sand—The beech.
You can't get into my trunk—The hemlock.
I'm never odd—The pear.
I sometimes go back on my pals—The peach.
It's pitch and toss—The pine.
By gum—The spruce.
I never unbosom myself—The chestnut.
Who said I was proud?—The plane.
You'll hear me down in Dixie—The cedar.
I've got the sugar—The maple.
They can't skin me—The fir.
There is no oleomargarine about me—The butternut.
I cannot sing the old songs—The basswood.
I will have to go to law—The sumach.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle,

THE Muskoka *Herald* says:—Several trains loaded with timber have passed through Pembroke on their way east. The timber belongs to Mr. N. McDougall, and was taken out on Sturgeon River, Nipissing. Messrs. Barnett and Mackie's Nipissing timber will not begin passing through Pembroke till May, as at present it lies on the ice on the opposite side of the lake from the railway track. When the ice disappears the timber will be floated across the lake to a siding on the Canadian Pacific Railway, and there loaded on the cars.

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. MAY 15, 1883.

FLETCHER BROTHERS, of Minneapolis, Minn., owners of a large tract of cedar land on Squaw bay, Duluth district, will operate several portable mills in working up the cedar on the tract this season.

THE *Northwestern Lumberman* says that Munroe, Boyce & Co., of Grand Haven, Mich., are reported to have been offered $110,000 for a tract of pine land in Chippewa county, Mich., for which they paid $40,000 a few months ago.

AT an adjourned meeting of the shareholders of the Arthabaska Lumber Co., held in Quebec on the 24th April, it was resolved that the Company be wound up voluntarily and dissolved, Mr. James R. White being appointed liquidator.

IN the House of Commons Sir Leonard Tilley said the Government did not foel itself justified in asking Parliament to impose an export duty on hemlock bark, neither did it propose to increase the export duty on spruce saw logs.

THE demand for oak timber in the West appears to be greater than the supply. Mr. Thomas Ouillette, of Anderdon, has shipped from his mill at Colchestor, three and a half million of oak car stuff to the London Car Works at London.

THE Winnipeg *Times* says :—During tho past winter two million ties were cut for the Canadian Pacific. The company will not, it is expectcd use the whole of this amount this summer, although a considerable quantity is to be utilized in repairing certain portions of the line.

Mr. J. W. Nesbitt, formerly book-keeper in Peterborough for the firm of McDougall & Ludgate, subsequeutly having charge of the limits and mills for the Bank of Toronto, and who has more recently been managing the lumber businoss of Mr. R. C. Smith at Fenelon Falls, has been appointed assistant manager of the American Lumber Company of Northern Michigan. The company is to be congratulated on having secured the services of such a competent, trustworthy and zealous officer.

THE Montreal *Witness* thinks if the railways generally become seized with a spirit of forestry renaiscence, as the Toronto, Grey & Bruce seems to have been, it will be a fine thing for the country. That corporation is having ten thousand larch trees from Scotland planted along its line.

THE oldest tree on earth, so far as any one knows, is the "Bo" tree in the sacred city of Amarapoora,, Burmah. It was planted in 288 B. C., and is accordingly 2,171 years old. Its great age is proved by historic documents, according to Sir James Emmerson Tennent, who says :—"To it kings have even dedicated their dominions, in testimony of the belief that it is a branch of the identical fig tree under which Buddha reclined at Urumelya when he underwent his apotheosis" Its leaves are carried away as streamers by pilgrims, but it is too sacred to touch with a knife, and therefore they are only gathered when they fall.

THE *Sun* of Brandon, Manitoba, says that Mr. Wright, a farmer living in township 4, range 20, is now in the city, and reports that on his journey through township six he saw a number of soft maples raised from seed sown last year that are now eighteen inches high. They are budding beatifully after passing through the rigors of the Northwest winter, and give every promise of a healthy and rapid growth. This should settlo the question of forest culture on our Northwest prairies. Mr. Wright is endeavoring to procure some seed with which to experiment on his own farm. It is an example that all our farmers might profitably follow.

VICTORIA, Australia, now claims the glory of holding tho biggest of all the living "big trees" in the world, so far as height is concerned. In the Dandedong district, at Fernshaw, has recently been discovered a specimen of *Eucalyptus amygdalina*, or almond-leaf gum, which reaches the enormous height of three hundred and thirty feet to the top, having a girth of sixty feet at some distance above the ground. Some idea of what a height of four hundred and thirty feet represents may be gaiued from the fact that this gum-tree, if growing by the sido of the House of Parliament at Westminster, would overtop the clock-tower by exactly one hundred feet.

THE *Trent Valley Advocate* says that Messrs. Gilmour & Co's. large mill is now in full operation. The machinery has beeu greatly improved during tho winter, and the cutting capacity thereby increased. The cedar mill is running every day, aud a large boiler and engine house is being built for the shingle mill. In this building will be twelve tubular boilers and one of the larger engines out of the old mill. Thc railroad leading to the piling ground has been well ballastod, and a large new locomotive been placed on the rails which will be nsed for drawing the lumber trains from and to the piling ground, while the two small ones which were used last season will uow be used on and around the docks for shipping purposes.

THE London *Timber Trades Journal* says :—Up to the preseut we can hear of no large first hand transactions in Quebec, and we believe the bulk of the stocks are still unsold. It is reported that the merchauts who usually visit this country in the beginning of the year have been disappointed by the result of their trip, values of pine deals having declined since the first sales were made, and nothing like the volume of trado has been done as was expected. In timber the usual amount, we hear, has been sold, but the prices realized have not beeu satisfactory. In the London market stocks are held in first hands at firm prices, but we understand very little is yet sold. That business, however, has not been idle in the f. o, b. trade we can well believe, as a cousiderable amount of tonnage has been secured at 65s. for the Thames. In Glasgow things are said to be anything but promising for the pine trade, and the competition with Lower Port spruce and Baltic white wood is depreciating the commoner qualities imported from Quebec, while sales of all descriptious are reported as being dull.

A KINGTON despatch says that J. P. Lett & Bro., of Bedford Mills, cut upwards of 2,000,000 feet of timber on their limits in Bedford township during the winter. They aro now running mills night and day, cutting every 12 hours an average of 20,000 feet of lumber. The season's cut has been sold in advance.

A NUMBER of timber trespass cases have been brought in the Territory of Oregon, the encroachments being upon the land grant of the Northern Pacific Railway Company. The government agents reported the trespass with a view to prosecution, because the land, though in the title of the railroad, was unearned. Secretary Teller decides that the government can only prosecute with reference to even sections, and that the railroad clearly has authority to prosecute trespassers on odd sections, though its grant is unearned.

ARBOR DAY.

THE success that has just attended even the first observance of "Arbor Day," as set apart by the Government of the Province of Quebec, is very satisfactory, and promises even better results in the future when the people become more familiarized with the subject. It is rather the fashion in some of the other Provinces either to sneer at or patronize Quebec as an unprogressive and little energetic community, but in this respect, as in some others, it has set an example that their critics may well follow.

The establishmeut of "Arbor Day," the setting apart of a public holiday for the planting of trees, is not a new idea, but is borrowed from our neighbors, where in several of the States the treeless prairie has already been converted into fairly wooded country. The usefulness of this process is plainly evident. So far in Canada there seems to have been a ceaseless war waged against the forest. Settlers and lumbermen have agreed, however much they might disagree on other points, to strip the land of its forest wealth, without a thought of maintaining a future supply. The circumstances of the case, the dense forests of the earlier settled portions of Canada from which the intending agriculturalist had to hew out his farm, and tho timber regulations which have almost forced upon the lumbermen the policy of makcting their pine as rapidly as possiblc, have alike tended to foster the idea that the mere cutting down of a tree was a meritorious act which could not be repeated too often. As for the future, that might take care of itself, and our forests were deemed practically inexhaustible. The result is that our piue lands have been trenched upon to an enormous extent, that the settled country has been stripped of sholtering trees till winter killed wheat, or cattle sweltering in the summer sun testify to the improvidence of those who frequently burned timber which would now be more valuable than the cleared land.

It would be well for Ontario and the other Provinces to follow the lead of Quebec in this matter. The direct effect of "Arbor Day" would be beneficial to a very great extent, and besides it would have the further indirect benefit of inculcating throughout the community the lesson which is already being slowly learned, that if trees are cut down others must be planted, and above all that a more sensible and economical policy in regard to our public forests, a large portion of the capital of the people, should be adopted and cuforced by the Governmeut.

OAK vs. PITCH PINE.

OUR attention has been called to a matter which should receive the serious consideration of those concerned. We are informed that till quite receutly in Canada our white oak was invariable used for car sills ; now, owing to the somewhat advanced price of oak, many car builders are substituting southern pitch pine for this purpose. Now, while this class of pine is excellent material for many purposes, there can be no question as to its total unfituess, in comparison with white oak, for car sills. Pitch pine, something like our own red piue, is short in grain and brittle, lacking altogether that toughness of fibre so preeminently characteristic of white oak, aud which marks the latter timber as so peculiarly fitted for any purpose where it is required to stand a great strain or carry heavy weight. The sill is the most important part of the body of a car, and unless it will stand heavy shunting, and bear great and constant pressure, without risk of fracture, it is unsafe, and a source of danger to traffic and the travelling public. This is where we think pitch pine will be found wanting, and so, when too late perhaps, the railway companies and car builders will find out.

There can be no doubt as the superiority of white oak over pitch pine or any other wood for this purpose ; it is the toughest, its power of resistance to pressure is the greatest, it is not liable to crack or splinter by a sudden jar, thus reducing the danger in cases of collision, and, it is the product of our own country, while pitch pine has to be imported from the Southern States.

THE OUTLOOK.

News from the drives is not very encouraging. The Rifle and Cedar and tributaries are hung up, and the same report reaches us from scores of small tributary streams to those of more importance. Never in the history of the Tittabawassee Boom Company has there been so few logs within the boom limits on a corresponding date as at the present time, and the water in nearly all the streams tributary to the father of logging streams is at a very low stage. Unless there is a superabundance of rain within a very short time, it is inevitable that even with the short season before us, many of our mills will be short of stock. It looks at present that before the shipping season shall near the end logs will be logs and lumber will be lumber on the Saginaw river, and those who have been hoping and expecting a decline in the price of our principal product, will find themselves woefully mistaken. This condition of things is not confined to the Saginaw river alone, but the streams in the Lake Superior district are similarly situated, the snow having disappeared gradually and the earth adjacent thereto in an absolutely dry and parched condition ready to absorb an ordinary spring rain ; and consequently nothing short of a fair proportioned deluge will be successful in bringing the log crop to the mills. Indications at present are unmistakably in favor of high-priced lumber and opposed to any reduction in price. If the present state of affairs in regard to logs continues to exist, even the coarser grades of lumber must soon present a firmer attitude, and the owners of this class of lumber may undoubtedly rest easy, from present indications.—*Lumberman's Gazette.*

THE SWEDISH TRADE.

A Swedish correspondent of the *Timber Trades Journal* under date of 19th April, writes that "the driving out of the logs from the district of the Ljunga, Indals, Angerman, and Husum rivers, has this season been so exceediugly bad that the supply from these districts will be quite 30 per cent. less than during ordinary years. There is also a fear of very bad floating this spring, if the snow should melt away before lakes and rivers are free from ice. Still the weather here is very cold, particularly in the night, and all around about there are masses of ice and a considerable quantity of snow. The Lake Malare and the harbor out to seaward from Stockholm are still strong enough to drive on with horses and carriages." This we give for what it is worth ; at any rate the shortage in the log crop auticipated by the above correspondent, even if his views prove correct, will not affect the first open-water production, the leading brands of which we have already stated are now pretty nearly sold out. The rivers the writer mentious are in the centre of the chief timber-producing districts and any iuterruptiou to the floatiug in those parts would probably be more seriously felt than in any other portion of Sweden. The Angerman supplies Hernosand and the district bearing that name, while the Sundswall district is mainly depeudeut on the floatage of the Ljunga and Iudals streams for its wood production.

ST. JOHN LUMBER EXPORT

Twenty vessels left St. John in April laden with timber and lumber. The quantity they took was 749 tons of piue aud birch and 15,804,000 feet of deals aud battens. For the four

months ending with April the clearances of lumber from that harbor amounted to the following aggregate :—

Deals, battens and deals ends..25,455,717 sq. ft.
Scantling and boards..... 204,569 "
Palings..... 50,000 pcs.

Besides these there were 279 tons of pine timber and 1,579 tons of birch timber shipped from that city. Messrs. Mackay, Schofield, and McLachlan & Wilson sent all the timber, the whole of which went to Liverpool ; Alex. Gibson sent 18,800,000 of the deals, Stewarts & Guy Berans nearly all the rest. The destination of 637,414 feet of deals was Africa ; and 1,341,416 feet went to the Continent of Europe. Liverpool takes the largest share, with 5,764,000 feet, London next with 3,068,000 feet ; Dublin takes 3,009,000 ; Glasgow 2,349,000, Belfast, Penarth and Barrow next.—*Monetary Times.*

THREE IN ONE.

A correspondent writes to the *Northwestern Lumberman* from Tigerton, Wis., as follows :—With the expiration of certain patents, relating to the process of cementing two or more pieces of wood veneer, the three-ply system of manufacture assumes a new importance. Ignoring the question of cost, there are several advantages, which of themselves, must commend the process to furniture manufacturers, and, in fact, to all who make articles from wood, wherein lightness and strength are especially needed.

All have admired the neat and strong veneer chair bottoms and car-seats, but comparatively few have thought that this strength is obtained by the gluing together of three thin pieces of veneer, with the grain of the central piece running at right angles with that of the other two. Just here is involved the principle upon this scale-board may be applied with advantage in the manufacture of articles almost innumerable. To the furniture manufacturer a rare field is here opened, whereby he may execute new and fanciful designs, lighter and stronger than is possible to obtain by the use of sawed lumber. To the carriage and waggon manufacturer, various uses will readily suggest themselves, as also in the making of toys and similar small articles. Passenger coaches are already being lightened and strengthened by the aid of the three-ply veneer. The scale-board may also be profitably used in the inside construction of thrashing machines, fanning-mills, etc., and, finally, the house-builder can apply it for inside finishing and panels.

The process of gluing together two or more ply scale-board, or panel of plain surface, by the aid of an ordinary screw-press, is simple enough, but to form the necessary shapes for the different uses, as herein indicated, will, of course, require special machinery, which, as in other things, will doubtless be furnished as the purposes to be gained are fairly understood.

LUMBER CARRYING TRADE.

An Ottawa despatch says :—The American boat captains and owners still hold out for advanced rates for carrying lumber. They have formed an association and passed the following resolutions :—

1. Resolved, That all boats load in turn, as placed on list of arrival.

2. Resolved, That all captains of boats being offered $4.00 to New York and $3.75 to Albany shall refer such offer to the first boat on the list, or take said order and refer the same to said boat, as above stated.

3. Resolved, That should any captain of a boat having signed this list leave our ranks in any manner, or load contrary to our by-laws, we are empowered to publish his name in all the leading papers on our route and to stigmatise him as a man of no honour, and one in whom no dependence can be placed.

EXPENSIVE FOOD.

About the most expensive kind of food for porkers that we have heard of in many a day is that furnished by some of the pine land owners of South Carolina, who turn their pigs into the forest to shift for themselves, as it were, thinking it a cheap method of raising pork. It appears that the fondness of hogs for the juicy roots of young pines leads them to seek them assiduously, so that where hogs are allowed to roam in that region one can hardly find a young long-leaved pine in a thousand acres of pine forest. There being no young trees to take the place of the old ones used up by the lumbermen and the porcine marauders this species of pine is disappearing. It would be far cheaper for these men to furnish corn feed, and confine their hogs in pens, than thus to rob posterity of the rich legacy which properly belong to them.—*—Lumberman's Gazette.*

New York Notes.

The *Northwestern Lumberman* says :—The general appearance of the lumber market is not as satisfactory as hope pointed out a short time ago. There is an inclination in many directions to be bearish. A lower rate of values would be desirable to consumers, and buyers of stocks for consumption do not take hold with energy. A careful and conservative method is followed among dealers. There is naturally a little hesitancy at this season of the year, a waiting to see what particular damage is likely to be done by the periodical spring strikers. During the past week there was a dullness apparent in general trade. Iron has taken a new line of value, and that has a powerful influence on all other mercantile interests.

Durable Timber.

The trusses of the old part of the roof of the Basilica of St. Paul, at Rome, were framed in 816, and were sound and good in 1814, one thousand years. These trusses are of fir. The timber work of the external domes of the Church of St. Mark, at Venice, is more than 840 years old, and is still in a good state. Sound logs are dug out of bogs where they have lain for an indefinite period. But the best seasoned timber will not withstand the effects of exposure to the weather more than twenty-five years, unless the surface is protected by paint, or some other coating to keep out the damp, or the wood is treated by some preservative process.

The Census.

The third volume of the census reports gives the following statistics of products of the forests.—Cubic feet of square pine (white) 40,729,047, (red) 2,815,755 ; cubic feet of square oak, 5,670,894 ; cubic feet of tamarac, 4,652,575 ; cubic feet of birch and maple, 4,414,795 ; cubic feet of elm, 3,191,968 ; cubic feet of walnut (black) 59,032, (soft) 754,219 ; cubic feet of hickory, 387,619 ; cubic feet of all other timber, 48,956,958 ; pine logs, 22,324,407 ; other logs, 26,025,584 ; masts, spars, etc., 192,241 ; thousands of staves, 41,881 ; cords of lathwood, 98,311 ; cords of tanbard, 400,418 ; cords of firewood, 10,993,234.

THE Pennsylvania log markets have been active and very satisfactory to the sellers. Rafts have been rapidly taken at Lock Haven and other prominent points, under the stimulus of light stocks and good quality. The highest price given is 26 cents.

THE Shell Lake Lumber Company, of Shell Lake, Wis., has got in about 19,000,000 feet of logs, and is now building five miles of narrow guage road, in addition to the old line of four and a half miles. The streams in that vicinity are at a good driving stage.

THE *Timber Trades Journal* says :—Fifty-one arrivals are announced as timber laden vessels in our London list this week, of which 18—only a little over a third of the whole—are steamers, so that sailing ships are again predominating in the timber trade. Of the total number, Norway sent forward 23 vessels, but only four of these added to our stock of boards, and six were laden chiefly with fir staves, with which this market may now be considered well supplied, the rest were variously laden with deals, battens, and firewood, and one cargo of telegraph poles from Porsgrund. There are the usual liners from New York and from Gothenburg with joinery and other oddments. Three cargoes of mahogany and a good supply of other furniture woods have also come forward in this fleet ; so that scarcely any branch of the wood trade need now be short of the goods it may require.

FOR SALE

A Railroad Tie Saw & Carriage

(COMPLETE).

A HORIZONTAL ENGINE, 11x14 in., Fly Wheel 7 ft. Diameter, Band Wheel 4 ft Diameter, 12 in. Face, Heavy Bed and equal to new. ALSO,

A HORIZONTAL TUBULAR BOILER, 48 in. Diameter, 9 ft. long, with 96 2-in. Tubes, Fire Front, Back Door and Frame, Grate Bars and 40 ft. of Smoke Stack 22 in. Diameter.

CENTRAL IRON WORKS,

4L7 PETERBOROUGH, ONT.

LACHINE CANAL.

NOTICE TO CONTRACTORS.

SEALED TENDERS, addressed to the under-signed, and endorsed "Tender for the Formation of Basins near St. Gabriel Locks," will be received at this office until the arrival of the Eastern and Western mails on WEDNESDAY, THE 6TH DAY OF JUNE next, for the formation of TWO SLIPS or BASINS, on the north side of the Lachine Canal, at Montreal.

A plan and specification of the work to be done can be seen at this office, and at the Lachine Canal Office, Montreal, on the after TUESDAY, the 22nd day of MAY next, at either of which places printed forms of tender can be obtained.

Contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms.

An accepted Bank cheque for sum of $2,000, must accompany each tender, which sum shall be forfeited, if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted. The cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,

A. P. BRADLEY.
Secretary.

Dept. of Railways and Canals, Ottawa, 21st April 1883. 6d100-2L12

AUCTION.

Phosphate Lands.

Conformably to the 158th Section of the Quebec General Mining Act of 1880 (43-44, Vic. Ch. 12.)

Notice is hereby given that upwards of 6,000 acres of public lands situated in the Phosphate Region, in the county of Ottawa, Province of Quebec, and comprised in the townships of TEMPLETON, WAKEFIELD, PORTLAND (EAST and WEST), and BOWMAN, will be offered for sale by Public Auction, at the City Hall, in the city of Hull, Province of Quebec, on THURSDAY, the 31st day of MAY next.

Sale to commence at eleven o'clock a. m. sharp, upset price five dollars per acre.

Conditions of Sale—the purchase money to be paid in full at the time of adjudication, otherwise the land will be immediately re-offered for sale.

The purchaser to pay for any real improvements existing on the lot or lots belonging to any other party.

These sales will also be subject to all the previsos contained in the laws and regulations concerning mines at present in force in this province.

LISTS containing numbers of lots to be sold may be had on application to the Department of Crown Lands, Quebec, or to the Crown Land Agents at Montreal, Hull, and Thurso, P. Q.

Department of Crown Lands, Quebec, April 14, 1883.

W. W. LYNCH,
Commissioner of Crown Lands.

N. B.—According to law, the Department will not be responsible for the publication of the above notice by any journal not specially authorized to that effect.

Quebec, April 14, 1883. 1L10

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy ; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

WATER POWER

TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of entering into partnership with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect a building of any size suitable for factories.

R. & G. STRICKLAND

1d86 LAKEFIELD, ONT. w1619

TENDERS FOR TIMBER LIMITS IN THE N. W. TERRITORIES.

SEALED TENDERS addressed to the undersigned, and marked "Tenders for Timber Berths" will be received at this office until noon, on MONDAY, the 2nd day of JULY next, for Timber Berths in the North-West Territories, situated on the Moose Mountain, in the District of Assiniboia, and on the Bow River and its tributaries, above Fort Calgary, in the the District of Alberta.

Sketches showing the position, approximately, of these berths, together with the conditions on which they will be leased, may be obtained at this Department, or at the Crown Timber Office, Winnipeg.

LINDSAY RUSSELL,
Deputy of the Minister of the Interior.

Department of the Interior, Ottawa, 18th April, 1883. 1L10

SAW MILLS

AND

TIMBER LIMITS

WITH

Logs, Lumber, Store Goods, &c

FOR SALE

In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞Canada Pacific Railway now running through part of the property.

For full particulars address :—

WILLIAMS & MURRAY,

L7tf GODERICH, ONT.

VALUABLE

Timber Limits

And MILLS

FOR SALE,

CONSISTING OF :

About 300 miles of limits in the Counties of Joliette and Montcalm, in the Province of Quebec, well wooded with spruce, pine, cedar, and traversed by the La Quarreau, Dufresne, and other rivers.

About 25 acres of land (freehold) with a splendid water power and saw mill, store, dwelling house and outbuildings, on the La Quarreau River, at Montcalm, about 40 miles from Montreal

About 100 acres of land (freehold) with a splendid Steam Saw Mill, capable of cutting 100,0 0 logs per annum, a large house for manager, 14 dwellings for employees, large machine shop, planing mill, bakery, store, fire engines and house, wharves, a steam tug, 3 barges, &c., &c., at Charlemagne at the mouth of the L'Assomption River, about 17 miles from Montreal.

Also, booms and dams on La Quarreau, Dufresen, L'Assomption, and other rivers.

Three vessels drawing 6 to 8 feet of water can load at the wharves at once, and ships, drawing 25 feet, can anchor with ¾ of a mile from the wharves, and load from barges.

The whole is complete and in running order for carrying on a large and profitable lumber business, and will be sold at a low price and on favorable terms.

For particulars apply to THE EXCHANGE BANK, Montreal, or to

JOHN M. M. DUFF,
Public Accountant.

5L8 118 St. James Street, Montreal.

THE MANCHESTER SHIP CANAL AND THE TIMBER TRADE.

The question of the proposed Manchester Ship Canal is now agitating the minds of business men connected with the wood trade. They do not look upon the change this great work will involve as a matter to be fully realized; but it has so far passed beyond the range of theory, that, with a slight discount, it may be accepted as a fact, and as an undertaking that in a few years will be successfully carried out.

Considering the interests of a vested character involved or interfered with by this great project, it is natural to find a strong array of opposition brought to bear against it in Parliament; but we are of the opinion, looking upon the vast population in and around Manchester, that their influlnce will carry a weight on behalf of the project against which no class of interest can maintain a permanont oppositiou. For ourselves, so far as the wood trade is concerned, we do not wish to take party sides, our position is that of lookers-on, in which we cannot fail to be impressed with the opinion that, as an engineering work in unison with the current of feeling permeating the breasts of nine-tenth of the business mon of this day, it will be carried out in the immediatc future, and that it will prove an initial step in the introduction of ship canals into this country.

As we are not alone in this opinion, it may not be amiss to discuss the bearings of this great project on the wood trade, and the changes that will probably come over the spirit of the scono in few years.

Timber is a bulky snbstance, locally produced in small degree in the district claiming Manchester as its centre; but, nevertheless, a snbstance largely and extensively usod. It is one consequently obtained from sources outside this radius, one floated to neighboring scaports on the east and west coasts. These ports may be taken as Gloucester, Liverpool, Fleetwood, and Barrow-in-Furness, on the one hand, and Hull, Grimsby, and the northorn coal ports, on tho other. From these points it passes inland, and the various lines of supply spread like a network over the Manchester district. Theso ports are active feedors of the district, and their annual increase is directly traceable to tho growth of tho inland seats of trade.

So long as the Manchester district is dependent upon the coast towns, so long will these towns increase and multiply; their prosperity lies in their position on the edge of the water, where great ships laden with timber, etc., may be safely floated. The office of these towns is to act as agents for receiving and forwarding goods inland. So long as the deep waters are kept in the present bounds they will flourish, but upon the sea flood being conducted inland by natural or artificial means they must of necessity decline, as facilities would be offered for carrying goods past their gates and harbors and dispensing with them as outlying agents. The inland districts so changed would have their supplies brought direct to their doors, and the produce taken direct from their hands. The loss to the one, and the gain to the other, arising from such a change, would be unparalleled in the history of British commerce.

So far as Manchester is concerned, such a change is proposed to be brought abont by artificial means; an arm of the sea is to penetrate the low flat lands forming tho bed of the river Mersey, and sea-going ships are to float up to this great and busy city. The vast population of this centre is to be enfranchised from the outlying coast towns, and the receiving and forwarding will be saved, added to which there will be a saving in land carriage, which is the dearest form of carriage in the world.

That such a change will be a benefit to the Manchester community there can be no doubt. These people are competing for the textile fabric trade of the world; in many countries they are opposed by heavy, and even prohibitory, tariffs; and hence, in their struggle for existence, they are entitled at home to every relief or facility that can be granted them. From their inland position they have a prohibitory home tariff on their export business, a tariff that extends to their import business in having their goods passed through outlying ports and carried overland. That the abolition of this home tariff, even in part, would be other than a benefit there cannot be a doubt; this being admitted there only remains the question of the right, of the outlying ports, and the connecting railways, to continue to impose this home tariff upon the Manchester community. This right needs to be well founded to withstand the pressure which will naturally be brought to bear against it by some thousands, and even millions of people struggling to become free from what they consider trammels of trade.

The consequence of Manchester becoming a seaport will be to work an important change in the wood trade. The great city will undoubtedly unload the bulk of its wood on its own quays, and every cargo of wood so unloaded will be one diverted from the old course of passing through the neighboring ports. The growth of the timber trade in this inland town will run on all fours with the decay at other outlying ports, those doing the most with Manchester being the first to suffer. To Liverpool the change will be great, for it is the natural port of Manchester; in other ports it will be felt in proportion to the volume of trade. The landing of timber on the quays of Manchester will have this additional effect, it will be so much further inland, that it can be traded in first hand, and Manchester will thus become a rival in districts now largely fed by Liverpool. The Manchester merchants will be so splendidly situated in the centre of a great consuming district, that they will in addition be able to compete for a portion of the trade enjoyed by other ports. So far as the west coast is concerned, this change will fall heavily on Liverpool and Barrow-in-Furness, but it will not affect Hull, Grimsby, and the northern coal ports, in the same ratio. The trade of the country is pretty clearly defined, certain ground belonging to the west, and certain to the east coast; an imaginary line may drawn down the centre of the country. To the west of this line the district is supplied with Canadian spruce as a cheap building wood, and to the east with Baltic whitewood. We can illustrate it thus—Manchester and Rochdale are towns receiving west coast wood, and Sheffield, Huddersfield, and Halifax, towns receiving east coast wood. In certain states of markets this arrangement is broken; but, as a rule, it obtains. The loss to the east coast ports by the ship canal will be this, that the line of separation will be driven more to the east, certain towns, now claimed as east coast towns, will have to be surrendered to Manchester, and the east coast ports will have to contract their trade. This change will not be so serious as may be imagined, for there is the protecting clause that the two coasts deal in distinct kinds of wood. The west coast deals in American goods, whilst the east coast deals in Baltic goods. The spruce of Canada and the whitewood of the Baltic will be affected, the former claiming the benefit of the change, from the fact that these are the rival timbering woods in ordinary use. It may be noted that the Baltic redwood, so largely traded in on the east coast has no opponent in American woods, and it is only represented in Liverpool, when taken round to the west coast from the Baltic at great cost. It thus follows that the moving of the line of supply in spruce and whitewood to the prejudice of the east coast, will have but slight influence on redwood. The Manchester district consumes a certain amount of redwood; but we fail to see how the ship canal, an undertaking associated with the west coast, will affect this consumption, or cause it to be obtained other than from the east coast, which is geographically its natural channel.

We have noted it as our opinion that the wood trade of Liverpool will be affected by this great work; but there are certain branches of the business that will be but slightly touched. Take the instance of American hardwoods, such as oak, ash, elm, mahogany, birch, walnut, lancewood, &c. These goods are used all over England, and Liverpool is the great market of the country for them, being the nearest trading point from the American continent. The canal would exercise no influence in moving this branch of trade from Liverpool, for on goods passing north and south it would offer no benefit, and on those passing east, seeing that their cost is high compared with their bulk, and that the cost of carriage compared with their value is a small factor, it would affect them but little. The great change would be wrought on the cheap, soft, bulky goods upon which the cost of carriage is heavy compared with their value. Liverpool would have a small advantage in the import cost; this, in connection with the north, the south, and the home trade of Liverpool, would exercise a preserving influence; but it would have little influence in the Manchester district. Looking at the wealth and importance of Liverpool, we must credit that town with an earnest effort to retain its trade in face of the rival ship canal, and we must not presume on the high rates of land carriage being maintained when opposition like this is in the field. We may assume the rate will then be a low one, somewhat in unison with the East Coast Railways. In face of such a rate, Liverpool would not lose so much of its softwood trade might be assumed, and even Manchester itself, which would have to pay canal dues and extra freight on its own imports, might, and no doubt would, still remain a buyer from Liverpool. The markets to suffer would be the west coast spruce and east coast Baltic whitewood. The consumption of spruce would increase, and that of Baltic whitewood decline. The great depot for spruce would be Manchester, which, from its central position would command a trade in this common timbering wood, which would materially increase its consumption to the prejudice of Baltic whitewood.

Beyond this we are of opinion that the hardwood markets on the west coast, and the Baltic redwood markets on the east coast, would be affected, but in such a slight degree as not to disturb the present balance of trade. There are those that would argue that the hardwood trade of Liverpool would be affected the same as the softwood; this we fail to see, for the change of market would have to be met by the discontinuance of the coasting trade—a branch of trade that Manchester can never conduct, and one that will always exercise a binding tendency on Liverpool as a market. It is fair to assume that occasional cargoes of mahogany and other hardwoods will find their way to Manchester; this could only be for local consumption, not for sale and general distribution.

Upon close consideration we find that the disturbance of the wood trade arising out of the construction of the great canal will not be so great as at first sight would appear. The tendency of the trade to migrate to Manchester would be largely met by a reduction of railway rates between Liverpool and this great centre, and it must not be forgotten that there is a wide margin for such reduction, the existing rate being extortionate.—*Timber Trades Journal.*

TIMBER IN PENNSYLVANIA.

It has become generally understood that the lumber interests of Pennsylvania are things of the past, and that state has often been referred to as illustrative of what Michigan was coming to in the very near future. But Pennsylvania still has vast lumber interests and new mills in Pennsylvania are being planted to-day which would do no discredit to the Saginaw valley. The forests are far from being denuded, and not only mills but factories are being planted for the purpose of utilizing the valuable hard woods with which the state is abundantly supplied. The lumber interest of northwestern Pennsylvania is enormous even at this present time, and the *Builder and Wood Worker* of New York city, says that the division of Clarion and Jefferson counties, which found a market over the low grade division of the Allegheny Valley railroad and Red Bank creek, during 1882 shipped 400,000,000, requiring 36,000 cars and a number of boats and rafts. The district of the same counties shipping by the Pittsburg & Bradford railway and the Clarion river have shipped 23,000,000 feet, using 3,500 cars and a large number of rafts and boats, though the full run by water was not made, owing to the drought. There are several million feet locked in the ice, and owners have proposed blasting the ice with giant powder to prevent loss, but they are threatened with prosecution for killing the fish if they resort to such means.

During the year 1882 Forest and Elk counties shipped 350,000,000 feet, using 30,000 cars. The product for 1883 promises to be considerably larger, as saw mills are multiplying rapidly. A mill has recently been built near Elk City with a capacity of 160,000 feet of boards daily. It is now running at an average of 100,000 feet daily. Another of the same calibre is now being built. These figures represent mainly pine timber, and the supply of pine is becoming rapidly exhausted. Hemlock and hardwood still remain in unbroken forests, but a few years will exhaust the pine. Over 20,000 acres of woodland were shorn of pine timber in the counties of Clarion, Jefferson, Forest and Elk, during the past two years, and last year the product was a fourth greater than the two preceding years.

The growth of hard woods in Sullivan county is enormous, and new and extensive furniture manufacturing establishments are being erected at various points along the line of the railroads traversing the woodlands, to produce furniture and other articles of utility and ornament that have a ready and profitable sale. Several large factories for the manufacture of painted wooden furniture have already been built and are now in full operation, their daily production being heavy and valuable.—*Lumberman's Gazette.*

FORESTRY IN CANADA.

The Government of the Province of Ontario, comprehending that, although 120,000,000 acres of primeval forest still exist within its territory, the replacing of its timber supply for future needs will depend upon the wise provisions made now, has had under consideration a bill providing for the payment of a bounty out of the public treasury for the planting of trees along farm boundary lines and by the sides of roads. The bounty proposed is not very large, the maximum sum being twenty-five cents for each tree, but it is quite enough to make it worth while for farmers to preserve and transplant the young saplings which they find in the way of their agricultural operations, and a moderate annual expenditure would in the course of years produce results of immense importance. A little calculation will show that if the highest bounty were paid in all cases, a subsidy of $50,000 per annum would at the end of three years represent 600,000 young trees; or, supposing one out of every six to die, half a million of growing saplings, which, if planted only along the roads, thirty feet apart, would line them on both sides for a distance of 1,420 miles. Continued for fifty years, the same subsidy would have led to the planting of 10,000,000 trees, worth on an average $5 apiece, all belonging to the persons who paid for setting them out, but bringing in, nevertheless, to the public treasury in the form of taxes, supposing these to be reckoned at the moderate rate of 1 per cent., $500,000 a year, or ten times the amount of the outlay. This is, of course, a rather summary way of calculating profits, but there is certainly reason for believing that in Ontario, and still more in this country, a movement of the kind suggested would be very judicious.—*American Architect.*

Requirements for Fences.

The *Lumberman's Gazette* says:—The fact that we have in the United States six million miles of fences, which have cost nearly $1,900,000,000, and have to be renewed every fifteen years, makes the fence problem one of the most important, says the Chicago *Times*. It, however, interests most of the farmers, who have the bulk of the labor to perform and expense to meet, and the timber to furnish for their consumption. The consumption of the timber for this purpose interests nearly every philanthropist. It is reported that Kentucky requires annually ten million trees to keep up her "national fence," the old Virginia rail. The census bureau of 1880 shows an expenditure of nearly $89,000,000 on fence buildings and repairs in 1879.

WHY BE DOWNCAST?—True, you may be in a miserable condition—you may be weak, pallid, and nervous. You cannot sleep at night, nor enjoy your waking hours; yet, why lose heart? Get a bottle of Burdock Blood Bitters. It will restore you to health and peace of mind.

TAKE YOUR CHOICE.—You can be weak, nervous, debilitated, and despondent, disqualified for work of head or hand, or you can enjoy a fair share of health and peace of mind. Burdock Blood Bitters will alleviate your misery and do you a world of good if you will persevere in their use for a few weeks.

THE MICHIGAN FIRES.

There has been just issued from the signal service office at Washington a report on the forest fires in Michigan in 1681. It is a comprehensive and well prepared work, filled with many facts which are unfamiliar to the reader living in the vicinity of the devastated district. Our readers are familiar with the main facts of that seething, devastating, life and property destroying conflagration which swept over four counties in three days, but they are possibly not so well acquainted with the facts in detail or the causes to which the fires were attributable. The work just published says the extent and irresistable power thereof are largely due to atmospheric conditions which are considered worthy of explanation in the work alluded to, and the which conditions were so favorable to the spread of the flames, which destroyed two million dollars worth of property and 125 lives in the territory lying between Saginaw Bay and Lake Huron, and Tuscola, Sanilac and Lapeer counties. Although the fires had been burning more or less extensively for several days previously, the work of devastation and death did not begin until Monday, the 4th day of September, at which time the flames were driven by strong, changing winds that grew to be gales as the flames advanced. The spreading of the flames in Sanilac county are put down as the direct result of the passage of a thunder storm over the peninsula. Of course, to be added to the atmospheric causes alluded to, are natural and local causes, which are mainly responsible for the destruction, in the shape of a protracted drought, dried and withered grasses, acres of "slasbings," dry pine tree tops, and other inflammable material. But the causes and the history of the forest fires, which are of so recent occurrence, is familiar, and need no repetition here. We all remember when the appalling disaster became fully known, how the great, generous heart of the nation throbbed in response to the urgent demands of the grief-striken people, whose homes had been desolated. And while it is less than two years since the fiery scourge levelled everything in its track, the waste places have all been repaired, and through the munificent liberalty of a generous national offering the people are actually in better condition to-day than previous to the horror, and possibly better off financially than if the fire had never occurred. But outside of this there is a dark mantle still hovering over that burned district which it will take many years to efface, and which the liberality of the people, no matter how munificent, can never entirely obliterate. The memories of the loved and lost still linger with those remaining, and the impress of sorrow still marks the downcast, weary expression of the mother weeping for her little ones, but who can find no consolation or comfort. The work just issued by the government which has called for these reflections, is a brief, detailed history of the forest fires of Michigan which in after years will be valuable for reference because of the minuteness of detail.—*Lumberman's Gazette.*

COMPETING PINES.

The *Northwestern Lumberman* says:—It is the common hope of Southern lumbermen that the exhaustion of northern white pine will be a speedy process, for on this, they think, largely depends the rise of the lumber industry of the South. After many of the present owners of yellow pine and the mills for sawing it, are in their graves, the Michigan, Wisconsin and Minnesota saws will continue chewing up the virgin pine in those states; yet the increasing use of the southern variety does not depend on the extinction of its white rival. At the rate white pine is now being worked up, it cannot be many years before the better qualities will have become less plentiful in the market, and resort to other woods for finishing purposes will become more general than now. Gradually, as the hardwoods will have to be more and more depended on for finishing, yellow pine will increasingly enter into use, but it will be along time to come before yellow pine, for coarser and commoner uses, will not have to compete with the white and lighter, consequently more portable, variety For such purposes it will win a place mainly on account of its strength and durability, where such qualities are most desirable.

Chips.

THERE are 340 kinds of timber on the North American continent. The Dominion of Canada has 90 varieties—60 east of the Rocky Mountains, and 30 on the western slope.

THE Winnipeg *Commercial* says that a gentleman, just returned from the Shell River country, says that Mr. Crerar has nearly three million feet of lumber cut, which will be floated down to Brandon. On Bud Tail Creek, Nelson & Mackenzie have taken out about the same amount.

A DISASTROUS forest fire is raging on the Marshfield Plains, Mass. Three thousand acres of wood land have already been destroyed. Two hundred men are unable to control it. Several dwellings are in danger. It is supposed it caught from a match thrown among the leaves by a smoker.

THE Waubaushene correspondent of the Midland *Free Press* says that the large addition to the mill has been completed, and it is expected that the manufacture of lumber will be on a much more extensive scale than previous seasons. The Waubaushene mill is the finest in the Georgian Bay district.

TYREE RODES brought to Pulaski, Tenn., lately a monstrous burl that is on a log six feet long and three feet in diameter. It extends three-fourths of the way around the log, measures 16 feet in circumference, and weighs 4,500 pounds. It was found in Marshall county, and it took a six-horse team to haul it here. As such burls are valuable for veneers, Mr. Rodes thinks he has struck a bonanza.

THE *Timber Trades Journal* says:—It is now generally believed that the Government is about to authorize the Dock Company to so amend its charter as to enable it to substitute a wooden dock for the proposed stone dock at St. John's, Newfoundland. The *Colonies and India* says: "Mr. Simpson, the American patentee of the wooden class of dock, has arrived there for the purpose of taking the matter in hand."

THE *Monetary Times* says that the Amherst, N. S. wood-working firm of Rhodes, Curry & Co. are still adding to their premises, their latest addition being a building 60 feet by 30 for store rooms and show room. They make a specialty of church furniture, altars, and also hardwood mantels, veneered doors, etc., etc. They are making a second shipment to Newfoundland of a lot of doors, newell-posts, mantels and wainscotting.

THE *Northwestern Lumberman* says:—The tide is already flowing into Manitoba, and before the season closes it is certain that that province, as well as the Northwestern territories, will have received a large addition to their populations. Judging from Winnipeg advices, though there will be a vast amount of lumber wanted in that region during the season of activity in building, there will be plenty offered both from home and American sources of supply.

THE *Lumberman's Gazette* says:—There is an undoubted inclination among the lumber manufacturers whose product has heretofore been tributary to Chicago to ship their lumber direct to the points of consumption. The prospect for bearing or controlling the market on the part of the dealers, who are not manufacturers in that city, therefore is growing beautifully less, and will probably continue to become more improbable, if the determination of the manufacturers alluded to above is persisted in.

Although millions of feet of timber per year have for many seasons been taken from the northern forests of New Hampshire, it is stated that so rapid is the growth that there is probably an acreage of timber very much greater than that of twenty-five years ago, land which at that time was used for tillage being now entirely covered with a healthy growth of small trees, which in a few years will be placed on the market; while to the west, stretching toward Moosilauke, and to the east, as well as up to the "east branch" of the Pemigewasset, which, it is expected, the new railroad will follow in its course to the Fabyan House, lie thousands of acres of heavy "old growth" timber, which will prove to some one a greater bonanza than many a western silver mine.

WE have received the first number of *The Lumber Trade Review and Builders' Journal* published in New York. It is full of valuable information, is well arranged and neatly printed.

THE Belleville *Ontario* of May 2nd says:—The Grover has cleared with lumber for Oswego from the Eagle mill. The Grant and Belle of Hamilton, are still loading at this dock. The rate to Oswego on lumber from this mill is now only 80c. per M.

THE *Canadian Pacific Railway Register* says: The cost of lumber consumed by the road was over ten millions of dollars. Sixteen million feet of this lumber were brought from Minneapolis and it cost in Minneapolis $300,000, which altogether with the duty and freight would make it cost over $550,000. Six million feet of lumber were brought from Keewatin. This cost at the rate of $25 per thousand feet. Material to the value of $250,000 has been brought to the recently erected storehouse adjoining the works.

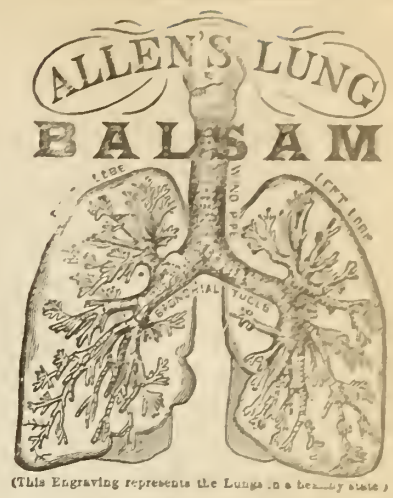
THE *Mail* says that owners of lumber vessels found it difficult to express their indignation toward the Alcona and tow for cutting the rate on lumber to Buffalo. Several charters at $2.50 were nearly made, with every prospect that that would be the opening rate, when the Alcona sailed in and accepted $2. The action would not cause so much disgust but for the fact that the Alcona was chartered to carry iron ore all season, and only wanted one cargo, in her eagerness to get which, she spoiled the chances of those who are regularly in the lumber business,

THE *Lumberman's Gazette* says:—If mill men all over the country would adopt the same system as those of Muskegon, and run their establishments only ten hours a day, it would be better for themselves and all concerned. Less hours, greater care in production, and economy in many places where extravagance usually prevails, will produce a cleaner, finer grade of lumber, and prevent any material reduction in the mill profits. This policy will also maintain prices, not only in the better class of lumber produced, but also in reducing the supply and proportionately thereby increasing the demand.

Mr. R. C. Fraser, inspector of ties and timber for the C. P. R., says there is piled along the Thunder Bay Branch, waiting for transport to the west to be used in construction, over 1,750,000 ties, besides piles, lumber and other materials to be used in construction. Some 3,000 men were engaged during the winter in getting out these material. These will now go out on their homesteads, or west to work on construction. The ties are worth 30 cents each delivered on the railway. They are of good quality. The value of the materials now on the track is about $1,000,000. Materials to the value of $300,000 are to be delivered.

THE *Canadian Pacific Railway Register* says: Fifteen miles east of the Red River at Emerson the line of continuous forests is reached—woods of almost impenetrable thickness—comprising all the varities of the Lake Superior region. West of the Red river to the Pembina mountians the various streams which drain this region sustain a fine growth of oak, poplar, elm, cottonwood and ash-leaved maple, Southern Manitoba being much more heavily timbered than the central or northern portion of it. Timber culture on the prairie is already carried on to a considerable extent, and in a few years quite a large quantity will be raised on "tree claims."

THE *Northwestern Lumberman* says:—In the county of Russell, Manitoba, 275 miles northwest of Winnipeg, 2,000,000 feet of lumber has been sawed and sold to the settlers for cash during the last two years, at an average price of $30 a thousand. This year 6,000,000 feet of logs are being taken out for local consumption. The operations connected therewith have employed men at $30 a month, with board, and for teams a corresponding rate is paid. Nearly all the supplies for the camps have to be teamed from Brandon, 200 miles distant, the teams earning $6 to $8 a day. These facts illustrate the energy with which settlement and improvement are being prosecuted in the Canadian Northwest.



(This Engraving represents the Lungs in a healthy state.)

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FOR SALE BY ALL DRUGGISTS.

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Proprietors, Toronto.

Market Reports.

TORONTO.

From Our Own Correspondent.

MAY 9.—There is considerable activity in the building trade in this city at present, although the boom is not yet up to the mark anticipated by many persons previous to the opening of the spring. Why this should be so it is difficult to say, when we take into account the fact that the demand for houses is brisk, and real estate agents say they have never had a better demand for property both for rental and purchase, and it is not going too far to say that more real estate has changed hands at remunerative figures during the last month past than during any previous month in the history of our city. This being the case, it may fairly be concluded that the opinions held by parties best fitted to judge in such matters that the remainder of the season will be one of increasing activity in building operations will prove correct.

On making inquiries of the various retail lumber dealers throughout the city, I find that nearly all give the same answer, viz., fairly busy.

In the wholesale market here the same condition of things exist to which I referred in my last letter—a continued glut of certain lines and grades of lumber, and I presume it is of but little use for one individual like your humble correspondent to reiterate, from time to time, through the medium of this journal, or otherwise, the advantage that might be gained, by wholesale dealers more especially, by organized action in all matters pertaining to their business interests. I need not go further than to point to the present position of the trade here, in order to illustrate the folly of continuing to act in a haphazzard style. One dealer takes a notion and ships forward from the mills to this market 200 or 300 M. of stock boards, another dealer does the same thing, and this is repeated in one or two other classes of lumber, and the consequence is a glut in the market, and no inconsiderable portion of such shipments have to be disposed of at a sacrifice. And yet how easy it would be to avoid this loss by united action amongst all the dealers, and which can only be obtained by a knowledge of the stocks held by each dealer and the wants of the market; in fact, call it by what name you like, there must be some means whereby interchange of opinions and matters of vital interest to the trade can be discussed, and if such is not the case things will go on in the same happy go lucky style as heretofore. Quotations at the yards remain the same.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

MONTREAL.

From Our Own Correspondent.

MAY 9.—Monday last was the day appointed by the Lieutenant-Governor of Quebec as "Arbor Day" for this section of the Province, and was pretty well observed by the Corporation and the schools in the city, the former planted some 600 trees, and, as *might have been expected*, in places and under conditions where *they were not wanted*. In country districts, and where planting was really wanted and would be a decided benefit, the day was quite ignored, and on making enquiries of nurserymen and others who have forest trees for sale we could not hear of a single plant having been sold. Our country population will require to be schooled into this sort of work before they will enter heartily into the matter.

Business here has been rather dull the past two weeks, owing to the boats with lumber being so slow in coming to hand. The Export Lumber Company have received seven boat loads, but this is all that has arrived so far this season. The building demand has been fair and it is expected that a rushing trade will be done this spring. The difficulty in supplying American buyers with the kind of lumber they wanted, which was experienced in the winter, seems to prevent the same class of buyers from coming near us now, but as large quantities of lumber for that trade has been manufactured this winter, they will soon find ample stocks to select from when they again pay us a visit. Prices are steady and unchanged as under:

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	3 00@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

FREIGHTS.

So far as the season has gone there have been no vessels taken up, either here or in Quebec, to load lumber for the River Platte. The rate of freight for deals to the United Kingdom is 60s. @ 67s. 6d., according to the port, 67s. 6d., has been paid to London and 65s. to Liverpool.

CORDWOOD

Has been in rather slack demand since the date of our last report. There has not been much brought in by boats, and what has come is chiefly soft wood, so that prices are well maintained, but it is expected that a fall of 50 cents per cord will take place during the next two weeks, although Upper Canada dealers are asking more for their wood than they did this time last year. We quote ex cartage:—

Long Maple	$ 6 50
Short "	6 00
Long Birch	5 50
Short "	5 00
Long Beech	5 00
Short "	4 75
Long Tamarack	4 50
Short "	4 00

WINNIPEG.

The *Commercial* of May 8th, says:—The trade in lumber has not been so brisk during the past week as might have been expected. There still remains an unsettled idea in the minds of contractors and a belief that lower prices will be secured ere long. On the other hand the dealers have a heavy stock on hand, and some are feeling the pressure of the same. The same unsatisfactory state of affairs noted in our last report exists regarding prices. There is yet no regular scale, and quotations of a reliable nature cannot be given. Prices are fixed according to the anxiety of the dealer to sell, and the purchasers have to search for who will sell at the lowest figures. The opening of the C. P. R. to Thunder Bay will no doubt do away with a great share of this cutting and bring matters to a regular system of reliable quotations.

CHICAGO.

The *Northwestern Lumberman* of May 5th, says:—An opinion has got abroad that lumber last year was too high in comparison with other commodities, which have settled in value, and there is a general inclination to sell for less money, and a determination to buy for less or not all. One note is sounded on this question from the salt sea to the mountains beyond the plains. The distributing trade has already lowered the value of yard stocks from $2 to $3 below last year's prices, and apparently intends to sell at that range, in any event. Now it demands that the holders of bulk supplies shall do the same. Really the latter have conceded a lower level of values, though they make a show of demanding last year's figures. In this market the drop on piece stuff between the two Mays is from $11.75 to $10, and as much as $1 on boards and strips. This is in actual transactions on this market, and is a foregone conclusion. In the Northwest the logic of events has decided that lumber is cheaper than it was last year, and it will do nobody any good to stout it out against that conclusion.

Receipts of lumber, shingles, etc., for the week ending May 3, as reported by the Lumberman's Exchange:

RECEIPTS.

	Lumber.	Shingles.
1883	15,522,000	29,053,000
1882	26,017,000	13,053,000

FROM JANUARY 1, 1883, TO MAY 3, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	58,510,000	86,151,000
1882	285,080,000	89,209,000
Inc		
Dec	126,570,000	3,058,000

STOCK ON HAND APRIL. 1.

	1883.	1882.	1881.
Lumber	412,007,038	279,324,096	332,491,234
Shingles	147,062,179	115,263,625	125,648,264
Lath	43,686,338	20,518,306	33,338,899
Pickets	3,497,232	3,802,011	1,589,064
Cedar posts	113,482	145,335	79,887

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of May 5, says:—There a very good demand for general lumber for building operations, and the market holds along on quite a firm basis, especially on choice western pine. Receipts by rail are closely taken up, and there are not many cars of really good lumber left in store. The spruce mills are quite well supplied with orders, and the market is maintained steadily. Hardwood are receiving a fair inquiry, and desirable and select grades seem to hold their own quite fully. Walnut is mainly in demand for furniture, and receives only a moderate call. Other kinds of hardwood are firm and in steady request.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N. Y.

From Our Own Correspondent.

No particular change in quotations, canals opened on 7th, boats plenty and freight rates low, $1.60 to Albany and $2.40 to New York. Lumber market decidedly dull.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@19 00
Culls	13 00@14 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LIVERPOOL.

The *Timber Trades Journal* of April 28th, says:—There has been little worthy of notice since your last issue concerning the general condition of trade. There is still the same monotonous cry of the want of life in the market, which is not relieved by the dry and open weather so necessary for the prosecution of building operations, although one would naturally assume from the numerous buildings that are being run up in this neighborhood, especially in the northern suburbs of the city, that some spirit would be infused into the trade. This, however, does not seem to be the case, although it cannot be denied that there is a firm consumption of timber going on.

The auction sales of last week included amongst others that of Messrs. A. F. & D. Mackay, who on Thursday last offered one cargo of St. John, N. B., spruce deals lying in store, and one cargo of St. John, N. B, birch timber and deals "to arrive," and in addition other parcels of spruce and pine deals from various port already on hand. There was a moderate attendance of buyers present, but the competition throughout was only languid, and consequently a large portion of the stored cargo of spruce deals was withdrawn. The St. John, N. B., birch timber consisted of two parcels, one brought down from the woods by railway, and one rafted down in the customary manner. Both lots sold fairly well, but prices were upon the whole easier all round than in the previous sales. Prices were somewhat irregular, as will be seen from the following particulars:—

St. John, N. B., birch timber unfloated—

20 to 21½ in. deep	25½d.	per ft.
17½ " 19½ "	23d.	"
18½ "	21d.	"
18 "	20½d.	"
17 " 17½ "	20d.	"
16 " 16½ "	19¼d. to 19½d.	"
15½ "	18d. to 19d.	"
14 " 15 "	18d.	"

The ordinary timber sold as follows:—

St. John, N. B., birch timber floated—

under 14 in. deep	16¾d.	"
20 to 23 "	25½d.	"
19 " 19½ "	21½d.	"
18½ "	20½d.	"
18 "	19¾d. to 20d.	"
17½ "	19½d.	"
17 "	19½d.	"
16 " 17 "	18½d. to 18¾d.	"
15½ "	17d. to 18d.	"
15 "	17¾d. to 18½d.	"
14 "	17¼d. to 17½d.	"
under 14 "	16¾d.	"
Do. ash—		
13 to 17½ "	24½d.	"
Do. maple—		
13 to 16 "	16d.	"

Do. spruce deals—

		£ s. d.	
12 to 15 ft.	3x11	8 0 0	per std.
12 " 15 "	3x9	7 5 0	"
9 " 11 " / 9 & 7 chiefly	3x11 / 9 & 7	7 2 6	"
9 to 24 ft.	3x13	7 2 6	"
9 " 24 "	3x12	7 2 6	"
9 " 24 "	3x10	7 0 0	"
9 " 24 "	3x8	6 17 6	"
deal ends		6 15 0	"
palings 5 ft.	3x1	4 10 0	per M.
" 4 "	3x¾	3 0 0	"

GLASGOW.

The *Timber Trades Journal* of April 28th, says:—Pitch pine timber has during the past few weeks has been arriving at Greenock pretty freely, and this year's import to date is now coming close on last year's total for corresponding period, the figures being: 1882. tonnage employed, nineteen vessels, 14,287; and 1883, fifteen vessels, 12,497 tons. The stock on hand at the end of March last was, of hewn timber, 4,639 loads; sawn, 10,734 loads; and planks, 240 loads. A cargo of pitch pine planks is included in the Glasgow imports of the past week. The arrivals of teak timber to Clyde

since the beginning of the year are represented by a carrying tonnage of 6,238 tons, as compared with 10,108 tons in same period 1882. The stock of teak at the end of March last was 4,703 logs, 4,106 loads, part of which (793 logs) was in consumers' hands.

Of the parcels of wood goods regularly arriving per steamship, staves form a large item. There have been about 230 mille imported here from the States since the beginning of the year, about the same quantity as in 1882. The stock in yard at present consists principally of barrel staves. Last month the deliveries of staves from yard amounted to 45 mille. Parcels of American walnut logs and whitewood, &c., keep dropping in per steamer. Of walnut the import since the beginning of the year is about six hundred logs. There are very few logs on hand at present and prices good.

AUCTION SALE.

On 19th inst., at Greenock, Messrs. Alison, Cousland & Hamilton, brokers :—

Quebec waney boardwood—		
30 c. ft. av. per log	1s. 4½d.	per c. ft.
50 " "	1s. 8d.	"
Prime sawn pitch pine—		
25 & 30 c. ft. av. per log	1s. 2d. & 1s. 2½d.	"
Florida oak 7 logs 1st class	2s. 5d.	"
Bangor spruce deals—		
14 & 15 ft. 9×3	10¾d.	"
22 to 31 " 7×3	10½d.	"
12 & 13 " 7×3	9¾d.	"
5 to 23 " 6/8×3	9½d.	"

LONDON.

The *Timber Trades Journal* of April 28th, says:—Apparently the turning point of the market has not yet been reached, and the expected improvement in prices so long counted on by the shippers seems as far off as ever. Looking to the stocks only, we certainly see no reason why an upward movement in values should not take place, and it is fair to assume that there must be other causes operating apart from the state of the supplies to sustain the indifferent attitude importers all over the country still display towards entering into fresh engagements. There can be very little question but that the present is a most severe crisis through which the general trade of the country is passing, and while the great manufacturing centres are comparatively inactive it can hardly be expected that other and independent industries can escape the depressing influences at work.

While the large body of importers continue to experience a falling off in the consumption they can hardly feel inclined to make fresh purchases on a larger scale than the actual exigencies of trade demand. To this is attributable what under other circumstances might be termed the ridiculously low counter offers they make when goods are put before them, and which, though seemingly anxious to sell, shippers do not yet see their way to accept. Of course, if no reaction to the present state of trade takes place, cargo values must come down, but we are not without hopes that before long the market will take a favorable turn. There is the chance of farming prospects improving and coming to the assistance of trade, which requires some stimulus to set it going again, and the outlook in this direction so far is favorable to a good harvest. Whatever shape the spring trade may assume, signs are not wanting of considerable activity during the summer and autumn.

Whatever appearances of apathy may prevade the cargo trade here, there can be no dispute about the present active state of the deliveries from the docks, and this, if it means anything, ought to indicate a good business doing in some direction or another.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says:—This port, as well as the harbours south hereof, may now be considered open for both steam and sailing traffic. Our friends in Norrland report that open water may be anticipated south of Hernosand between the first and the 10th of May, unless a succession of heavy weather from the north and east should drive the ice from the Finnish side and block up the entrances to our harbours; in which latter case it may be after the middle of next month before the ports in question are accessible to sailing vessels. The ice is reported to be of a respectable thickness about Sundswall, but rapidly becoming porous, so that it is unlikely that much damage will be occasioned to vessels coming in contact with the same.

The improvement in the sawn wood trade reported in my last advices has scarcely been maintained, owing to the action of one or two firms from the Lower Gulf, who have disposed of the cream of their stocks at high prices on the Continent, reducing their prices about 5s. per standard for what they have left. This action, although quite intelligible, has checked the ardour of buyers, who were only too glad to take advantage of the opportunity to endeavor to obtain a modification from other sellers. Notwithstanding this appearance of reaction on the surface, the intrinsic position of the trade is better than it was a month or two ago, and for redwood stocks, containing a fair proportion of mixed, full list figures are likely to be available before long, whatever may be the case at the moment. Swedish whitewood is in somewhat better demand for both Scotland and the Dutch ports, but prices offered are low and unremunerative.

AMERICAN vs. ENGLISH FORESTS.

There is a certain wildness in this country, known to hunters, fishermen and campers out, that any suggestion or relic of man profanes. It is found mainly in our woods. In England it is to be looked for rather in the solitudes of the moors. The pastoral or field life of nature in that country is so rank and full that no woods or forests that I was able to find could hold their own against it for a moment. It flooded them like a tide. The grass grows luxuriantly in the thick woods, and where the grass fails, the coarse bracken takes its place. There was no wood spirit, no wildwood air, as with us. Our forests shut their doors against the fields, they shut out the strong light and heat. Where the land has been long cleared, the woods put out a screen of low branches, or else a bushy growth starts up along their border that guards and protects their privacy. Lift or part away these branches, and step inside, and you are in another world—new plants, new flowers, new birds, new animals, new insects, new sounds, new odors, in fact, an entirely different atmosphere and presence. Dry leaves cover the ground, delicate ferns and mosses drape the rocks, shy, delicate flowers gleam out here and there, the slender brown wood-frog leaps nimbly away from your feet, the little red newt fills its infantile pipe, or hides under a leaf, the ruffled grouse bursts up before you, the grey squirrel leaps from tree to tree, the wood-pewee utters its plaintive cry, and sooner or later the mosquito demands his fee. Our woods suggest new arts, new pleasures, a new mode of life. English parks and groves, when the sun shines, suggest a perpetual picnic, or Maying party; but no one, I imagine, thinks of camping out in English woods.—*John Burroughs.*

THE Rogers Lumber Company has lately completed a narrow gauge road from Seney, Ga., on the East Tennessee, Virginia and Georgia road, thirteen miles south of Rome, south by west to Deaton, on the East and West road. It is nine miles long, and was built chiefly for carrying lumber, but passenger trains are also run on a regular schedule.

THE Kingston *News* says that J. P. Tett & Bro., of Bedford Mills, cut upwards of 1,000,000 feet of timber on their limits in Bedford township during the past winter. They are running their mills night and day, cutting every 12 hours an average of 20,000 feet of lumber, for which there is a good demand. All their lumber has been sold. The steam barge Edmund and her consorts will carry the lumber to Ogdensburg.

THE New York *Lumber Trade Review* says that California redwood is rapidly coming into favor here. There is a large demand springing up for carved panels, and workmen are learning to contrast white oak, cherry, sycamore, bird's-eye maple and ash with polished redwood, whose warm gleam of golden red is so cheerful in winter. Mahogany, redwood and oak, set off with polished brass fittings, form a handsome and much used combination for fine office finishing.

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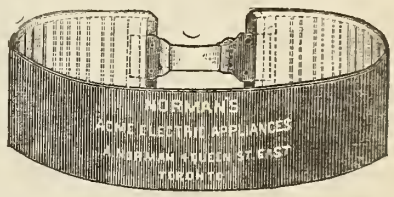

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ABOUT 2,300,000 feet of logs, from the White Mountain region, are in the river near Tilton, from which point they will be floated to the pulp mills, two or three miles down the river, ground into pulp, and converted into paper at the rate of 20 cords per day.

BLODGETT & BYRNE, of Muskegon, are making surveys for their proposed logging road from the Muskegon river to Portage Lake, Michigan, a distance of 20 miles. Eight miles of the line will be built this season. The route is through a large tract of pine owned by the firm. Some of the iron for the track is now at Roscommon.

THE New Orleans *Times-Democrat* says:—"The continued purchase of government pine lands in this section promises before this year has been completed to leave none for future entry. Cases are at hand where over 100,000 acres have been entered in the state of Mississippi during the last 30 days, and from reliable information the prospect for a scarcity in the log crop is imminent.

ON April 26 it was Arbor Day in Michigan. The legislature of the state has named that day as "arbor day," and set apart one fourth of the highway tax to be expended in setting trees along the highways, 60 feet apart. Each taxpayer, if he prefer, can work out one-fourth of his road tax in tree-setting.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably, Address TRUE & Co., Augusta, Maine.

FORESTRY OF THE MISSISSIPPI VALLEY.

During the recent session of the Minnesota Horticultural Society, in Minneapolis, Hon. F. P. Baker, Commissioner of Forestry for the United States, and editor of the Topeka, Kansas, *Commonwealth*, read a paper upon "The Forestry of the Mississippi Valley and Tree Planting on the Plains," which we would like, because of its excellence, to reproduce in full. Its tenor and the line of argument pursued can, however, be appreciated by our readers as they peruse the following extract :

Mr. Baker divided his subject into three parts, as follows:

First—The natural condition of the region, as found by the early settlers, or "what nature did."

Second—The changes that have been wrought by the progress of settlement, and through the agency of individuals and the national and state governments, or "what man has done."

Third—The question of future development of forestry, with some few practical suggestions as to the duty of individuals, corporations, and the state and national governments, or "what should be done."

After describing the plains as they were before settlement by white men, and showing what man has done, discussing the timber culture act, and showing what had and could be done, the speaker turned to his third subdivision.

He argued that the government had as unquestionable a right to protect the timber upon its domain as it had to protect the capitol at Washington, or the vessels carrying the flag of the United States ; to prohibit spoliation by the early settlers under the plea that useless and almost criminal waste "develops" the country. The custom of removing the timber from Government land for domestic use, and the abuses which followed in every portion of the country, were detailed at length—abuses in which railroads and saw mills participated largely. Near one Colorado town, and within a radius of ten miles, sixty charcoal kilns are running, with a capacity of 4,000 bushels each, per month, representing a monthly distribution of 240,000 bushels—all the charcoal being made from wood belonging to the United States, which receives no compensation of any kind ; and the actual settler is compelled to travel much longer distances for fuel in consequence of this reckless and unlawful destruction, The situation along the eastern slope of the Rocky Mountains, for as far as occupied by miners or penetrated by the railroad tie cutters, was fully illustrated, and Mr. Baker then turned to the question how the forests may be protected, deeming as the most efficient means the appointment of government foresters, to be composed of young, energetic and practical men, educated by the government, and the establishment of experimental farms, the schools to be distributed in different sections of the union, according to climatic division and the character of their natural forests. He believed in different systems of culture and irrigation in different localities, and results noted through a series of years—and in this work the government, people and railway companies might profitably combine. The government of the United States, being the largest land-holder, also has a paramount interest in reclaiming this empire and converting it from a wilderness to fields, gardens, orchards, forests and pastures. That the government should actually do the work is not to be expected, but it seems to be reasonable to expect that it should aid in doing it. Knowledge is power ; and let the government furnish the knowledge. The government owns the land ; it can set apart any amount of it which may be required ; it can place the work in the hands of the best practical talent in the country ; it can do on a large scale what individuals are doing on a small scale. As the government is impersonal and can be accused of no selfish or sinister interests, the statements put forth under the sanction of the government officers and agents will be accepted as the truth. It will be shown what trees can and what trees cannot be grown on the plains, what are the effects of copious and unlimited irrigation ; what is the actual amount of water required for given areas ; what is the result of irrigation on the same land for a series of years ; and, most important of all, what is the effect of planting large bodies of trees—actual forests.

The speaker next discussed the importance of adopting an amendment to the timber culture act, based on the theory "once a timber claim always a timber claim,"—that is, when a filing is under the timber culture act, the land should be withdrawn from entry under the homestead or pre-emption acts. The best method of planting trees—four feet apart instead of twelve, as under the law—the importance of cultivating timber on homesteads, the work which may be done by states and railway companies, were discussed in succession, after which Mr. Baker pointed out the duty of the people generally to cultivate forests, concluding his address as follows :

Much sentimental talk has been indulged in concerning our duty to the next generation. We should plant trees, it is said, under which our grand children may repose. This is doubtless a fine and ennobling sentiment, but the avorage American citizen cares little for the generation preceding him, and nothing for the one to come ; he expects the next generation to provide its own shade. The question he wishes to determine is whether the trees he plants will benefit men in this generation. Curiously, people almost always overestimate the age of trees. Who has not heard a great elm or oak spoken of as centuries old, when it really has grown within the life time of living men? Trees are a sure crop, and, after all, a quick crop. The homesteader who goes out on the raw prairie knows that it is five years before his farm can be producing crops with anything like regularity. His trees are making a return as soon as his fields are. The Mennonite settlers in Kansas, of whose success we have spoken, in seven years, at the farthest, from the time they turned the first sod, are literally sitting in the shade of the trees they planted ; are raising their own firewood, and eating the fruit of their own mulberry trees. What these settlers from Russia, strangers to our climate and soil, can do, others can do. It must be remembered, too, that the objectors have had their day ; every argument which can be used against the cultivation of forest trees has been used in the prairie states west of the Mississippi against the cultivation of fruit trees. For example, men accustomed to hillside orchards in the old states have demonstrated to their own satifaction that apples would not grow in Kansas ; but wagons full of round and rosy evidences to the contrary may be seen standing in the streets of every Kansas market town. The number of those that till the soil, be it a bit of garden ground or acres by the hundred, who believe in the profitableness of trees, is constantly increasing. In front of the humblest cottage in town you see the three or four maples or elms covering the front of the lot ; and out on the wide prairies, as far as settlement has extended, the group of planted trees marks the outpost of the picket guard of civilization. It is with the hope of contributing in some way to this useful and and beautiful pursuit, which is to shelter the bare and blistered earth ; which is to catch and hold the rain and the dew ; which is to shelter the home and its occupants from summer's heat and winter's cold ; which is to bring fuel and comfort to the housewife ; and which is to increase by millions the well-earned wealth of a nation, that this paper is submitted.—*Wood and Iron.*

DURABILITY OF WOOD IN BUILDING.

Herr Weise, Forest-Inspector at Eberswalde (Germany), says a contemporary, has recently published a summary of his observations bearing on the above subject. considers that the system now usual for the supply of wood is in some measure to blame for the complaints which are from time to time made by experienced authorities as to the reduced durability of modern woodwork. He remarks that in the Middle Ages the whole of the wood for any large building was carefully selected from one spot, and after being felled was stored and dried together, a certain homogeneousness in the woodwork being thus obtained. Nowadays wood is used just as it is delivered by the dealer, coming from various districts and having been felled at different seasons, these circumstances causing a more or less marked divergence in quality. He remarks that the first tendency towards decomposition shows the disadvantage of using various qualities of wood together, and calls attention to the fact that microscopic observation of the approach of decomposition is not by any means as much used as it might be. He considers that the development of agriculture and the neglect of the judicious extension of forests have exercised an unfavorable influence upon the quality of wood in modern times. In illustration of this assertion he cites the fact that trees yielding 35-inch planks (such as are to be found in the castle of Fuessen) can only be exceptionally found even in forests under Government control.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of March, and for the first three months of the year :—

MONTH ENDED 31ST MARCH., 1883.

	Quantity.	Value.
Timber (Hewn).	*Loads.*	*£.*
Russia	288	2,343
Sweden and Norway	73,637	118,426
Germany	1,519	6,352
United States	5,678	21,015
British India	2,525	36,336
British North America	803	3,076
Other Countries	38,744	45,613
Total	123,194	233,106
Timber (Sawn or Split, Planed or Dressed).		
Russia	1,938	5,154
Sweden and Norway	101,909	252,444
British North America	3,957	8,373
Other Countries	12,801	43,767
Total	120,605	309,738
Staves, (all sizes)	6,271	25,623
Mahogany (tons)	4,597	46,626
Total of Hewn and Sawn	243,709	54 2,904

THREE MONTHS ENDED 31ST MARCH, 1883.

Timber (Hewn).		
Russia	1,064	4,064
Sweden and Norway	103,241	163,948
Germany	6,272	23,632
United States	11,202	45,368
British India	13,958	192,698
British North America	4,720	21,761
Other Countries	102,570	117,838
Total	243,027	569,309
Timber (Sawn or Split, Planed or Dressed).		
Russia	8,478	21,549
Sweden and Norway	144,358	360,078
British North America	42,019	97,355
Other Countries	26,525	95,598
Total	221,380	574,580
Staves (all sizes)	10,530	54,574
Mahogany (tons)	10,184	97,583
Total of Hewn and Sawn	464,407	1,443,889

Spruce Trees Dying.

BANGOR, Me., May 3.—It is reported from the lumber regions of Arostook that spruce trees are dying rapidly. Last winter the operations were on a part of the township where it was expected that 700,000 feet would be cut, but only 85,000 feet of sound spruce could be found. An examination shows that the spruce in the rest of the townships is in the same condition. As far as ascertained no worms are at work on the spruce, and the cause of the decay is a mystery. The tops of the dead spruce trees are of a reddish color, as though scorched by fire.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

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A FINE HIT.—When the proprietors of Burdock Blood Bitters put this renowned medicine on the market, they hit it exactly. They hit dyspepsia, indigestion, and liver and kidney complaints a hard blow, from which they will never recover.

AN EXCELLENT REPORT.—Hon. Jos. G. Goodridge, of Brooklyn, N.Y., writes :—"I cannot express myself in sufficiently praiseworthy terms of Burdock Blood Bitters which I have used for the past two years with great benefit."

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Hear What the Deaf say!

It has performed a miracle in my case.
I have no unearthly noises in my head and hear much better.
I have been greatly benefited.
My deafness helped a great deal—think another bottle will cure me.

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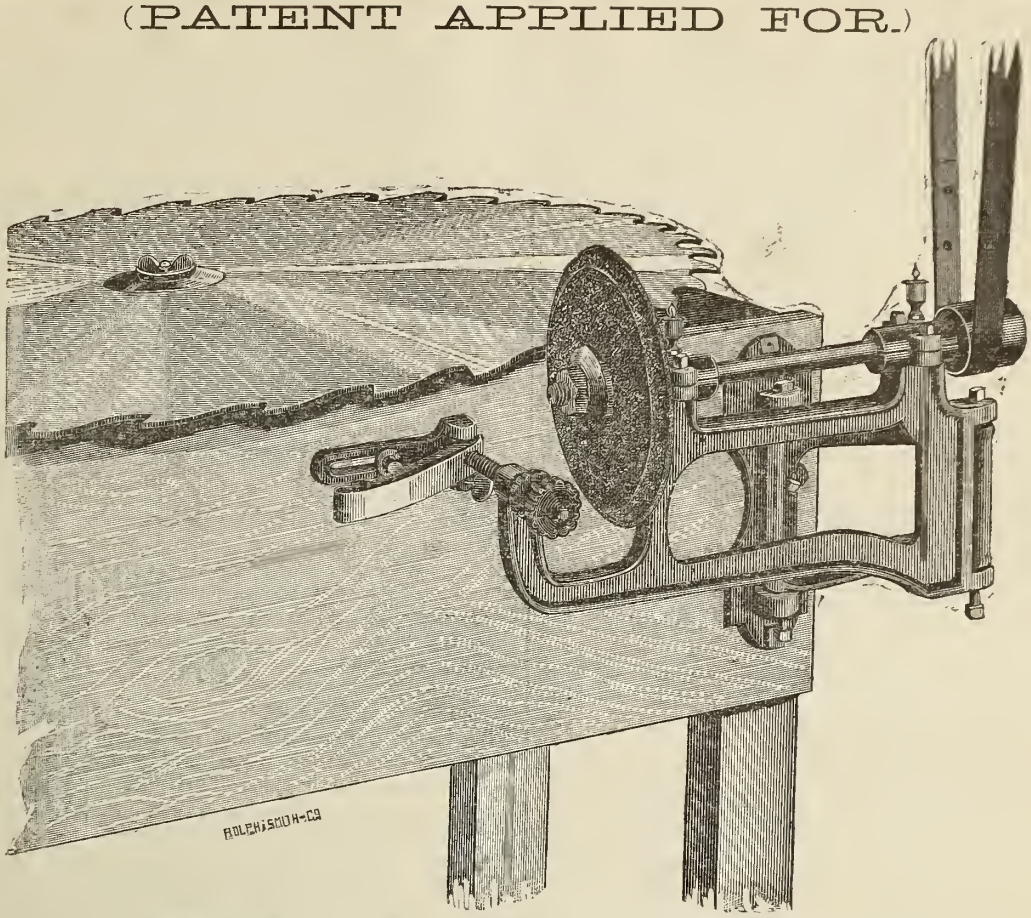

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TIMBER OF THE U. S. NORTHWEST.

Practically, the whole country between the Minnesota prairies and the Rocky mountains is bare of timber. There are little strips of forest trees along the water courses in Dakota, but they consist mainly of cotton wood, soft maple, and alder, and furnish only a scanty supply of fuel to the settlers and are of no value as a source of building material. West of the Missouri there is nothing worth sawing into lumber until the advanced spurs of the rockies are reached—the Big Horn, the Belt, the Judith, the Big Snowy and the Yellowstone mountains. In the gorgos running up their sides there is sufficient "bull pine" and spruce for the settlers' purposes, and for railway ties and bridge timbers, but there are no large well-timbered areas. On both sides of the main divide of the Rockies about the same condition is found. The pines are somewhat larger, and some cedar is met with. For want of something better, the timber is of great value for local consumption, for fuel and building purposes in the neighboring valleys, but this is all that can be said of it. Not until I reached Clark's Fork of the Columbia, or the Pend d'Oreille, as it is known to the settlers, did I see any extensive body of good timber. On both sides of the stream, between the Cœur d'Alene and Cabinet mountains, lies a heavily timbered belt of about 100 miles in length by 30 miles in width, reaching down to and around Pend d'Oreille Lake. The trees are "bull pine," cedar, hemlock and spruce with a little white pine. The western slopes of the Cœur d'Alene mountains and the Bitter Root mountains, which are a continuation of the same range, are moderately well timbered and furnish material for fuel, fences and buildings for a wide stretch of rich, bare country further west. From these mountains westward, to the narrow valleys running up into the Cascade range, the country is nearly destitute of forest growth. A few stunted pines grow on the sides of the deep narrow valleys through which the streams run. Along the lower course of the Columbia and around Puget Sound there are immense forests of fir, furnishing a practically inexhaustible lumber supply. Eastern Oregon is almost treeless, but the slopes of the mountain ranges bear sufficient timber for local uses. Eastern Washington, fast becoming a great wheat field, feels most the lack of forests. Western Oregon, including the fertile, well-settled Willamette Valley, is well supplied from both the coast and Cascade mountains, while western Washington, is all a vast forest, where the clearings are mere specks upon the immense expanse of woodland. This magnificent forest is destined to be a source of great wealth for centuries to come. The lumbering operations up to this time, although very extensive, have only notched it here and there at long intervals close to the water side.—*E. V. Smalley in the Century.*

TREE PLANTING ENCOURAGED.

Though the prospects are very remote when this country will be called upon to seek its necessary supplies of timber in foreign countries, lumbermen should bear the fact in mind, that from other than a commercial point of view, our forests are of inestimable value. It has been proven conclusively that where forests abound droughts are entirely unknown; and there is no doubt that the character of the deposition of water in wooded regions is much more gentle, and therefore fertilizing, than in denuded countries, where long droughts alternate with short but violent rains.

The farming class of this country are fast awakening to this fact, and in numerous instances State Legislatures have been called upon to take action to encourage the setting out of young trees. Kansas has entered boldly into the spirit of the subject, and a day has been set apart in each year, when every citizen is expected to cast his mite, so to speak, into the treasury, by setting out one or more trees in his immediate locality. Iowa, not to be outdone in this respect, has bills before the legislature, offering a bounty to those who plant and maintain for a specified time a given number of young trees. As an illustration of the interest taken in the West in this movement, it may be said that a considerable amount of prairie land in southern Indiana and Illinois has been successfully converted into forest, and the natural adaptation of the soil for this purpose is shown by the fact that in a single square mile of wood seventy-five species of trees, or almost as many as are found throughout the whole continent of Europe, were observed to be growing. These seventy-five species included nearly all the varieties of valuable timber trees known, and specimens of fifty-one of them were found which were estimated to be at least one hundred feet in height.

This subject is of vast importance, particularly to the Eastern section of our country, and action should no longer be delayed. Droughts are becoming more and more frequent, and the effect upon the crops is illustrated at times in a manner not pleasant to realize or consider. Let "tree planting day" therefore be enumerated among the list of legal holidays, and instil into the minds of our young the necessity of providing for the wants of future generations—a duty mixed with pleasure.—*Lumber Trades Review.*

DANGER OF FOREST FIRES.

Now that the drying winds have commenced to shriek through the forests, drying the leaves scattered thickly over the ground throughout valuable timber lands, aided of course by the warm sun, care and precaution should be exercised whereby the customary damages by extensive forest fires shall be lessened or prevented entirely. The Philadelphia *Times* pertinently refers to the subject clearly and forcibly in the appended article:—

The usual spring floods are doubtless over for this season. The drying winds of the past few days have been preparing the way for another destructive agency, the spring forest fire. The most general and destructive of these usually occur during the months of April and May. The warm sun and drying winds render the last year's fallen leaves as dry and inflammable as a tinder-box. There is as yet no crop of green foliage even partially to counteract the dangers arising from the drying mass of combustibles. Of all the States in the Union, Pennsylvania probably suffers the greatest annual loss from this source. The mountain-sides are covered with much valuable timber, but the lumberman and the tanner are making sad havoc with our forests, and the methods pursued only prepare the way for a greater waste of timber by fire.

A last year's bark peeling or lumber camp furnishes the material upon which this year's forest fires will revel. When once started the flames do not stop with burning up the dried branches of fallen timber, but spread over miles of green and standing forests, causing untold destruction. It is stated on the authority of the last census that in the year 1880 alone more than 600,000 acres of Pennsylvania forest were burned over, with an immediate loss exceeding $3,000,000. The loss in increased sterility of soil and lessening rain supply is incalculable. After one of these fires in the pine or hemlock forests of the state there is very little grows but briers, fireweed, and a cold moss.

There are laws more or less adequate already on the statute book of the state for the suppression of these damaging conflagrations. But they will not execute themselves. The farmers and other forest owners must organize for that purpose or laws are useless. This should be done at once, in advance of the danger. In such a matter the value of the ounce of prevention is almost incalculable. Prompt and watchful attention on the part of all interested will prevent many forest fires in their inception, before which, when once started, the usual means of suppression would prove perfectly worthless. The preservation of our streams and the maintenance of the rainfall are of too much importance to the welfare of this commonwealth to be treated lightly. Add to these public considerations the value of the private property exposed to danger and sufficient motives are offered for the most strenuous efforts to prevent these annually recurring disasters to our forests. —*Lumber Trades Journal.*

A TIMBER SEIZURE.

There is not the least doubt about it; and a big one, too. Section B company for the past winter, have been doing an extensive business in the way of getting piles, timber, lumber and other materials. Some 3,000 men were engaged during the winter in getting out these materials, and there has been piled along the Thunder Bay Branch, waiting for transport to the west, to be used in construction, over 1,750,000 ties alone. These ties are worth 30 cents each, delivered on the railway, and are of good quality. The value of the materials now on the track is about $1,000,000, and materials to the value of $300,000 are yet to be delivered. The winter's operations have drawn to a close. It will be seen that a very large amount of timber has been cut by those cutting timber. But it is said that this company have not complied with this demand, and have not paid their license. But they are not going to be allowed to get of "scot free," for the department have given instructions to their agent here, Mr. Wm. Margach, Government Inspector of Timber, to proceed at once and seize all the ties and timber that has been cut by the aforesaid company, and Mr. Margach left here on Saturday last for that purpose. He took the train as far as Savanne, from which place he will take to the woods and seize everything that has been cut, posting up notices that anyone touching the materials will be arrested and dealt with as a person would be for stealing. His instructions are very emphatic, and he informs us that he intends carrying them out to the letter. Of course there will be a grand "kick" on the part of the company, but that is to be expected. Nevertheless the Government will hold firm until their demands are met. It may be claimed that the Ontario Government have nothing to do with the timber or lands in this disputed territory; nevertheless they intend to lay claim to it. This may be the means of a speedy settlement of the boundary dispute, as to which Province this territory belongs.—*Prince Arthur Herald.*

ARBOR DAY.

The Montreal correspondent of the Toronto *Mail* says:—The judicious appointment by the local Government of an annual "Arbor Day" has met with immense and most gratifying success, not only here, but throughout the whole province. Tuesday, May 7th, was a gala day both in the city and vicinity, and from the despatches published this morning Montreal has nothing to boast of as compared with other cities and the rural districts. In fact, it was observed as a fete day everywhere. There was a good deal of enthusiasm among those present when the the trees in the names of her Royal Highness the Princess Louise and his Excellency the Governor-General were planted on the mountain side here. All the *elite* present took part in the operation. The Mayor and corporation thoroughly entered into the spirit of the celebration. There is now no danger of our magnificent forests being wasted, since the whole population is enlisted in their preservation as well as perpetuation.

A Tell Tale.

The barometer in the lumber business that best tells the condition of the times is thick stuff. The demand for it increases as properity becomes greater, and diminishes as the people notice that they are being pinched. A man who puts up a house when he feels well-fixed and happy will use one and a half or two-inch doors, but if he feels for plenty of dollars in his pockets, and they are not there, he will content himself with thinner ones. Three or four years ago when we were emerging from the ruins of the panic, thick stuff was everywhere abundant, but now it is everywhere scarce, and it will remain so until hard times strike us again. Buyers of houses may take a hint from this. As a rule, if a house is built when money is easy, it will be better built in every respect, than though erected when the builder is uncertain whether his bank account will hold out against his lumber and carpenter bill.—*Northwestern Lumberman.*

Tree-Planting in Texas.

An exchange says that tree-planting in Kansas has made an encouraging beginniug. Two plantations, of 500 acres each, in Crawford county, illustrate what may be achieved in this direction. One of the plantations is conducted by the Fort Scott & Gulf Railroad Company, primarily to furnish ties and timber for its own use, and with a view to affect ultimately a great saving by this enterprise. The western catalpa appears to be the tree preferred for planting on the prairies. It is a native of the lowlands along the streams in Kentucky, Tennessee and Missouri. The wood is tenacious of life, is soft and almost indestructible, even when exposed to the weather, and has proved so durable that the farmers of Missouri, it is said, have nearly exterminated the species in their eagerness to secure it for fence-posts. It is also an exceedingly rapid grower. A block of 100,000 seedlings planted in the spring of 1879, on rich soil in the Fort Scott forest, already ranges from 10 to 15 feet in height, while the individual trees vary in circumference from eight to 11 inches.—*Northwestern Lumberman.*

A GRAND FORKS SCHEME.

A meeting of citizens was held at Grand Forks, Dak., April 26, for the purpose of considering a proposition of a Michigan party, whom the *Plaindealer* lazily calls "Mr." Howard, for building a mill at that point. The offer is to invest $500,000 in the enterprise, if the citizens of Grand Forks will subscribe a bonus of $50,000. It was stated that Mr. Howard spoken of was thoroughly responsible, and owned a $300,000 mill in Michigan—a statement that no man who knows the cost of sawmills can swallow. Before the meeting adjourned the subscription was raised to $20,000, and it was throught that the desired amount of local guarantee could be easily obtained. This is the first tangible effort that has been made to locate mills at Grand Forks for the manufacture of Red Lake pine, that will soon be opened by the government for sale. As Grand Forks is at the junction of Red Lake river with the Red River of the North, and at the very gateway of the immense demand for lumber in northern Dakota and in Manitoba, it is the natural manufacturing and distributing point for pine in all northwestern Minnesota. If the active men of Grand Forks do not take the opportunity that lies within their grasp they are sillier than they have a reputation for being.—*Northwestern Lumberman.*

THE Toronto *Globe*, in alluding to the death of Leonard Bacon Hodge, says.—There has just gone to rest from St. Paul, Minn., a quiet, unostentatious man who has probably done more real good than many who will find a place among the world's great ones. Ever since 1854 Mr. Hodges has been actively engaged forest-planting on the prairies of the northwest. From long experience his mind had been a perfect storehouse of facts concerning forestry. It was he who dictated the legislation of his state under which Minnesota is fast becoming a wooded country. He also founded the State Forestry Association. His work will endure for ages, and of him it may be truly said that future generations will rise up and call his work blessed.

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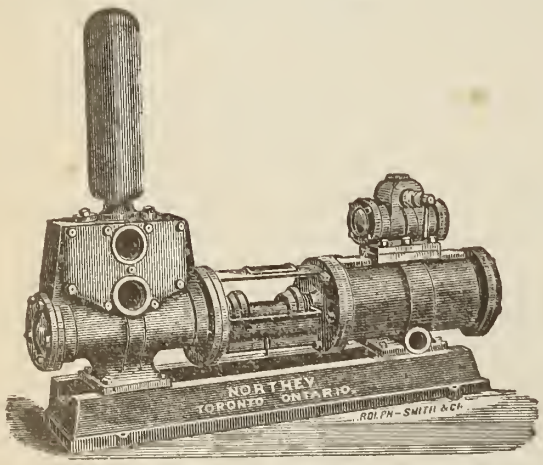

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THE PRINCIPLES OF WOOD BENDING.

The following extracts are from a lecture delivered before the class in carriage drafting and construction connected with the Metropolitan Museum of Art Technical schools, New York, by H. G. Shepard, of New Haven, Conn.

* * You may go back as far as the antediluvian races, but though the art was known and practised away back, no progress was made, and principles which underlie successful wood-bending were unknown to them. Their method undoubtedly was, simply to bend a stick while it was green and hold it in that position until dry; and the first use to which they put this bending undoubtedly was to make bows with which they shot their arrows. Coming down from that time to the present we find but very little progress in wood bending until the introduction of steam. I may add that even now wood bending is yet in its infancy, for although the principle upon which wood bending must always be done has been discovered and is in practice to-day, yet its various applications have not been made to any great extent, and there are new discoveries constantly being made, Such discoveries have been made within the past year, which I believe will increase the amount of wood bending fourfold within the next ten years.

* * The first wood bending I have any recollection of was done by my mother, who, paradoxical as it may seem, used to bend me across her knee to keep me straight. The wood she used was always badly slivered and broken after she had finished, so that it was of no further use.

* * The use of bent wood, is probably still in its infancy. In my belief, we do not use to-day one piece where in ten years from now we will use four.

* * If I wished to bend a stick and have it remain in position and keep its shape the best, I should put the heart on the outside, for the reason that the tendency of the wood is to bend from the heart; but when I have a difficult piece of bending to do, like a corner-piece, that requires a great deal of upsetting and end pressure, without giving way, wrinkling or anything of that kind. That is the way I use the heart of a stick. When I wish a piece to remain in a certain shape, then I put the heart on the outside, because the tendency of the stick will be in the direction in which it is bent.

* * As to the peculiarities of bending, after a piece of wood is bent its character is almost entirely changed. It is wonderful how it is changed, and by that change it is better fitted for any use, I claim, than it was before. Bending makes the wood heavier; it is pressed together, and the same bulk of wood weighs more after it is bent than before. Another peculiarity is that when it is thoroughly dry, it is stiffer than the same sized piece of wood, that it is alike every other way in regard to grain. It will admit of more strain, and move less out of its position than a piece of wood that is unbent. On this account it is better fitted for carriage making than sawed pieces. I have taken two circles, one sawed out and the other bent, both of the same character of wood and as nearly alike as I could get them; I placed the concave sides together and put pressure on the ends to bring them in contact. They were subjected to equal strain. I found that the bent piece had preceptibly more influence over the sawed one, than the sawed piece over the bent one.

* * A piece of timber that has been steamed, whether it is bent or not, has its stiffness increased. It is more brittle than it was before, and, for some uses, it will not do as well; and yet there is a quality of timber that the steaming process and the kiln-drying process affect very much the same; they both cook the gum in the timber and make it brittle and stiff. There is a grade or class of hickory that is benefited by being steamed or kiln-dried for use as spokes or whiffletrees. There is a kind of hickory that never becomes stiff by a natural process of drying, and one of the desirable qualities of a spoke, rim, or whiffletree, is stiffness as well as strength; you take that hickory, and it is the very best we have, and steam it, and it is better fitted for these purposes than it was before. It is difficult to tear apart a piece of bent wood; the fibres are interwoven one with the other. We do not perceive the change on the outside, but when we come to split the stick open, we find that its character is entirely changed.

PLANTING TREES.

A few words about planting trees. It is a seasonable topic, and much might be said upon it. There are, of course, differences of opinion as to the best time for transplanting. Some maintain that spring is the proper time, and others say that better results are obtained from fall planting. Our own opinion is that it makes no difference, as long as the work is carefully done. The strong argument in favour of fall planting is, that farmers have then more leisure on their hands, and they can then afford to spend time in doing the work well. But, no man should undertake what he has not time for doing, whether in spring or fall, else he may find that time, labour and money have been spent in vain. We have all heard of Hodge, a type of man made famous in the cartoons of *Punch*. Hodge is not the right sort of person to be entrusted with the task of transplanting trees.

"I rams 'em in, now thick, now thin,
For what cares I if they grow or die."

No; Hodge will never do, unless master is beside him and directs every movement. Strength is by no means the best recommendation, either in taking up or setting out trees. Skill pays; so does patience. Two men are needed, and three are better. The holes should be roomy; deeper and wider than the roots require, for, with a margin of loose earth, the rootlets will speedily stretch out in search of food supplies. With a bushel or so of muck for each hole, to form a bed for the tree and a partial covering for the roots, the chances will be greatly improved. Place the roots naturally on the ground, and pack the earth firmly around the tree, at least as high as it was before removal. If the work is well done in this way, and with occasional watering, if the season is dry, the loss need not exceed one in a hundred. But, of course much depends on the condition of trees at the time they are set out. If they have been carried a long distance, and have been roughly handled, it is just possible that no kind of care can save them. In the case of a mutilated tree, it is far better to stand it aside and lose it at once.—*Rural Canadian.*

A RAFT IN THE RAPIDS.

The Kingston *Whig* says:—Probably the most miraculous escape from death by drowning ever experienced by the hardiest voyager, says the Montreal *Star*, took place Saturday morning, May 12, at Lachine. It seems the tug boat John MacDonald had towed a valuable raft of timber from Chateauguary to the head of the Lachine Rapids, with the intention of leaving it in the South Channel. However, just as the raft had neared the channel in question the current, which here takes a sharp bend, swept it around with terrible velocity towards the more dangerous and rocky South Channel, whence escape is rarely made. The strain was so great that the hawser parted and the raft was dashed down the tortuous rapids at lightning speed. The men on board, 13 in number, assembled on the front of the raft perfectly powerless to save themselves from their imminent peril. They had not proceeded far, however, before a terrible shock was felt, the raft having struck a reef and parted in two pieces. The men still escaped unhurt and managed to raise a sail with the intention of steering the raft through the rocks, which rose on every side. The wave swept over the hardy raftsmen, threatening them with destruction every moment, and finally the whole number took refuge by climbing to the top of the top of the mast. The raft struck a rock the second time, smashing it into fragments, and the men were precipitated into the water, but still held on to the mast for dear life. They had nearly reached the foot of the rapids by this time, and soon drifted out into still water. An Indian passing in a large boat, seeing their perilous position, came to their assistance and rescued them in a half drowning condition, several of the men having nearly succumbed from exposure to the icy water. The raft, which is of oak, is the property of Calvin & Son, of Garden Island and is valued at $6,000.

ARBOR DAY.

The London *Daily Telegraph* mentions with approval the custom of tree planting on "Arbor Day," favored in the United States, and recommends it to the notice of landlords in the British Isles. The growth of timber has a two-fold advantage. It is always a profitable crop, and besides, the presence of trees tends to equalize the rainfall, preventing sudden floods on the one hand and prolonged droughts on the other. With the abundance of timber still growing in Canada, we are apt to be careless on this important economic question. But the axe of the speculator is exerting its power, more perhaps in the destruction of saplings than in the removal of full grown trees. It has been urged on the Dominion Government that some encouragement should be offered to tree planting. The advantages arising from the presence of trees ought to prevent the farmer from entirely denuding his land; but the desire for quick gains frequently maks the farmer careless for the future and indifferent to difficulties that he is laying up for posterity.—*Mail.*

A Magnificent Fir.

One of the finest conifers in Germany, known as the Royal Fir, stands near the village of Albernhau, in the Erzgebirge mountains. Its diameter, forty inches above ground, is six feet ten inches, sufficient to conceal a horse and rider placed lenghtwise behind the trunk. It begins ramifying at a height of thirty-four feet, and the full elevation to top of crown measures 154 feet. It is thought to be the tallest and strongest representative of the species, not only n Germany, but in the whole of Europe. This noble tree, which is supposed to be 500 years old, now shows signs of decay, having died ont on the apex of the crown since the year 1874. The enormous dimensions of the tree may be better realized by cordwood measure. The shaft is estimated at 51⅝ cords; limbs and brushwood, 12⅞ cords, making in all 64⅝ cords.

Premier and Axeman.

In an article on the institution of "Arbor Day" on this continent, the London *Standard* says:—"It has long been an accepted tradition with Americans that no axe is worth wielding unless it has been made at Pittsburg, or at one of the many Sheffields or Birminghams scattered over the United States. Even Mr. Gladstone is said to prefer an American to an English axe, although it is on record that a Canadian lumberman, who once saw him ply the weapon at Hawarden castle, declared that our vigorous Prime Minister has still much to learn before he can preteud to possess such proficiency with the axe as is common in the backwoods of Canada."

MR. E. B. EDDY'S MILL AT HULL.

The night will be still fresh within the memories of residents of Ottawa when a few hours of fierce fire swept away almost the whole of one of the greatest industries of the vicinity, for a time threw hundreds of hands out of employment, and destroyed property valued at hundreds of thousands of dollars. The calamity for a time spread consternation in the vicinity generally, and deep as would have been public sympathy for the enterprising proprietor, Mr. Eddy, it was rendered all the more profound by the fact that he was then absent from home and in a poor state of health, which it was feared the disaster would still further impair. But where most men will sink Mr. Eddy will swim If he did not speak he acted the words of Shakespeare :

" Sick now, droop now,
How have I leisure to be sick in such a bustling time?"

The fire it will be remembered occurred in winter at a time when many building operations are impossible, but with an energy with which neither sickness, fire or frost could conquer, Mr. Eddy at once set to work to reconstruct. Such buildings as had only been partially destroyed were repaired, and every precaution used to render them as secure as possible against fire. Plans for the new mills were rapidly prepared, and in a few weeks in spite of jack frost the work of reconstruction was begun, and within six months time over the ashes of the old structure has arisen the most substantial and best appointed mill of its size on the continent of America.

The new saw mill, which stands west of the road leading into Hull, is an attractive looking, well proportioned and substantial building. Its side walls are of solid masonry, rising 32 feet from a solid rock foundation, 5 feet thick at the base and three feet thick at the top. These support a "suspended arch" roof of 120 feet span, neatly framed and well braced with iron rods, some 18 tons of rods and bolts being used in its construction. The dimensions of the building are 147x120 feet. The roof itself is of galvanized iron laid upon tongued and grooved sheeting, the latter painted on the inside with fireproof paint. It contains sixteen skylights, each of a single sheet of glass 5 ft. by 3 ft. and a half in. in thickness, which materially aid in lighting the floor below. The timbers supporting the floor and heavy machinery are of the most substantial character, framed on an entirely new principle, put together without mortice or tenon,

The machinery is all of the most modern and improved kind used in saw milling. On the main floors are four upright slabbers, two stock gangs, a circular, three edgers, three butting tables, a splitter and several stave saws. The saw logs are drawn from the ponds into the mill by three endless jack-chains. The slabber gates work upon hollow cylindrical tubes, through which cold water is forced to prevent any heating of the bearings. The two stock gangs are from the celebrated makers, Messrs, Wickes Bros., East Saginaw, Michigan, and styled "The Wilkin's Oscillating gang," acknowledge to be the best gang saw in the world, cutting from one to four logs at once, as may be devised. These gangs rest upon solid piers of cut stone masonry, 20 feet square and 12 feet high, boltod with 56 iron bolts 2½ inch iron, 18 feet long. The "circular" is from the Stearnes Manufacturing Company, of Erie, Pa., and carries a sixty inch saw with a 42-inch top saw, and will cut logs up to five feet in diameter, and 50 feet in length. Two of the edgers were also made by this firm, and have double the capacity of the old class of edgers. Ranged along the right hand wall are 13 tub and pail stave saws of various sizes. Numerous line rollers convey the lumber from the saws to the buttings tables, edgers, etc. On the lower floor is found a wilderness of belting pulleys, wheels and other machinery for the driving power. Here, too, the slabs and edgings, supplied by sluices from tho floor above, are cut into laths, pickets, shingles and various small strips. Everything possible of the raw material is utilized in this establishment, even to small pieces one-sixteenth of an inch thick. In one cornor of this room is a Silsby rotary force pump, with pipes and hose attached, and having a pumping capacity of 1,600 gallons per minute. The cutting capacity of the mill is estimated at between forty and fifty million feet in the season. To the south of the mill is a compact stone building 62x60 feet, with the roof in the same style as the main mill. This contains two segments for re-sawing deals, etc., made by Messrs. B. Fricher and Mallory, of Chicago. These are, however, not yet running. To the right a large room is partitioned off for for saw sharpening, filing, etc., fitted with five "Covill patent automatic saw sharpeners" and "Kenny's swedge," made by Wm. Hamilton, of Peterborough, Ontario. In front of these buildings is a spacious platform where the lumber is stocked and loaded on tram cars for transport to the piling ground. These two buildings, with machinery in them and the platform, are said to have cost over $100,000. On the north bank of the Government slide channel there have been erected stone buildings for blacksmith's shop and machine shop, the 40 feet by 60 feet and the latter 80 feet by 60 feet, roofed similarly to the main mill, one being used for the present as a planing mill, adjoining them to the west, the foundations are being laid of a stone storehouse, 120 feet by 60 feet, and two and a half stories high. This will be used for the storage of woodenware and factory supplies. To the west of this again will be the offices in a substantial stone building two stories high, with a mansard fireproof roof, covering an area 30 feet by 90 feet, and affording amplo accommodation for the management of Mr. Eddy's extensive establishments. A large stone factory is also in course of construction on the south side of the Government slide, which will be 185 feet by 60 feet and two stories in height. This extensive building will, when finished, be used for the purpose of packing in the upper story and as a planing mill on the lower floor.

On the old site on which before the fire the flour mill lately owned by Mr. C. B. Wright stood, but which has since been acquired by Mr. Eddy, will be erected a fire proof boiler-house, excavations for the foundations of which are now going on, from which will be supplied the necessary heat for the other buildings. It will also contain two Silsby rotary pumps with a capacity of 1,200 gallons per minute each, and from whence pipes and hydrants will he laid through all the yards and buildings.

The fire service will be as complete as it can bo made. The three Silsby rotaries will have a combined power of 40,000 gallons of water per minute, the distribution of the hydrants has been thoughtfully and judiciously made, the provision of hose is ample and placed at easily accessible points, and in addition the establishment has a fire corps of its own, composed of its most cool, active and intelligent employees, each of whom knows where his post is in case of emergency, while at the same time the residences of all the foremen are connected with the main office by telephone and electric fire alarms, so that when off duty at any hour of the night or day they can be instantly called if necessity so requires.

The electric service is also very complete. The entire yards, building and piling ground are lighted with electricity, and telephones and fire signals are in position at all important points.

To drive the machinery requires 24 water wheels, with an aggregate force of 3,000 horse power, and work is given, in the various establishments to over 1,600 hands, many families in Hull and its vicinity being employed in it, while while hundreds of other families depend on the work it gives their husbands and fathers for their support. In addition to those employed in Hull, Mr. Eddy employs several hundred men all the year around on his limits in the woods. The piling grounds are commensurate in extent with the rest of the establishment, and comprise, including the old Batson & Currier yard recently acquired by Mr. Eddy, an area of about sixty acres. A tramway conveys the lumber there from the mill, and it will be relaid with steel rails this spring. A walk through is necessary to comprehend the tremendous trade done. It was no small undertaking to build and fit up such buildings in the course of six months, especially when it is remembered that much of the work had to be done during a rigorous winter. Mr. Eddy's energy was equal to the occasion. He had able aids, too, in Mr. Mousseau his head millwright, Mr. Millen, and Mr. Blackenoy, by whom the plans were drawn, the work superintended and the machinary put in position. It must be satisfactory to these gentlemen to feel that the whole work was carried out without one casualty, and that when first put in motion the whole ponderous machinery worked without a hitch. The contractor for the stonework was Mr. R. Lester, and for the ironwork, Messrs. Butterworth & Co.

The late fire it may be remembered, destroyed the pail factory and gutted the machine shops and part of the match factory. Those were, however, rebuilt and refitted some months ago, and operations in them suspended only for a short time.

Mr. Eddy's trade in matches and wooden ware is tremendous, and extends over the Dominion from the Lower Provinces to Manitoba, where his name is a household word. The capacity of his factories for these goods is enormous, being able to supply the wants of double the present population of the country.—*Ottawa Citizen.*

THE HUSBANDRY OF FORESTS.

The grave consequences of the ruthless and wholesale destruction of our forests have recently been enforced with fresh emphasis by both nature and science, and it is high time steps were taken to repair, as far as may be, the damage that has been done. The people of Ohio, who have perhaps suffered more than the inhabitants of any other State from floods that are largely a consequence of the denudation of their forests, are making an earnest effort to guard against these destructive forces in the future. The messages of the more recent Governors of that commonwealth have bristled with warnings against the continued destruction of trees that has been going on for half a century, with exhortations to make the waste places good as far as possible. The traveller through the Ohio valley to-day would hardly believe that that fertile part of the State was a dense forest seventy years ago, but such neverthless it was. Last Friday was what is called Arbor Day in Ohio—that is, a day set apart by the Governor for tree-planting, a past-time that was generally participated in by the rural population, the children of the public schools in many of the cities having taken part in the ceremony. The State Forestry Association, which was in session in Cincinnati, also participated, thus giving practical point to their theories. Many thousands of young trees were planted in various parts of the state, from which beneficent results are anticipated as the years roll on. The present generation of tree planters may not see the fruits or enjoy the benefits of their work, but the man who makes even one tree grow where none grew before has done something for posterity and his country, and has built a living monument for himself which will long keep his memory green The idea of an Arbor Day is an excellent one, and might be adopted with advantage by other states.

Of all the natural resources which a state may possess, none are of higher or more general importance than its forests. They supply that upon which a great variety of skilled crafts may be employed. They furnish shelter which is next in urgency to the need of food. They enable us to build fleets of vessels with which to offect the world's exchanges. Unlike mines, which require a costly outlay for working, the forest yields a revenue to the wood-choppers' first day's work. Their beneficieut influence upon the climate of a country has been abundantly shown in the sad experience of lands which, like Spain, have been stripped of their growth. The forests are unlike the mines in this, that the latter cannot be worked without a near or remote approach to exhaution. With the trees of our forests the case is different. They stand as the highest type of growth in naturo. Reared as they are by the kindly nurturing influence of the sunbeam, they renew their life as constantly as tho day succeeds the night, and their period of growth is fixed according to the stated order of the seasons. The fact that they do not mature in a single seasou, that one generation must plant, another generation enjoy the abundant harvest, while the intervening generations must be content to watch with patience the slow but steady growth of some of the more valuable varieties of timber, ought to give to the general public as deep an interest in the husbandry of forests as in that of any other product of the soil.—*N. Y. Shipping List.*

AN ENGLISH VIEW.

There seems to be some movement in the spruce trade of late, though at prices which do not look to be renumerative to the shipper. We hear of sales of St. John spruce under £7 c.i.f., and it is said other lower port deals have been contracted for in the neighborhood at £6 15s. If these figures are to relied on, we do not, we must confess, understand the reason of the Liverpool brokers and agents for the spruce houses in Canada forcing the market in this fashion at the commencement of the season. There has been no doubt a quietness in the spruce trade at the outports for the past few months, hut with the advent of the husy season it does not look either a healthy or encouraging sign for spruce deals to be sold at prices indicated above. It is true, competition is severe among the representativcs of the spruce houses, and to place several thousands of standards in Liverpool, and round the coast, may be a very laudable desire on the part of the representatives to show their activity and power in disposing of their shippers' stocks, hut if the price is unrenumerative we fail to see the benefit to the shipper. This competition to sell, at even a loss, is a deplorable sign, and, if we turn to the freight market, we find it does not strengthen the sellers' position in these sales.

Ships for bringing deals from Canada are not plentiful ; the brokers do not know where the vessels are. Rates, as yet, are quoted moderate, but as the season advances and the scarcity of the wood-sailing tonnage is felt, as it is from Quehec now, sales of spruce at low figures will not bring happiness to the shippers. From Quehec to Liverpool and London 68s. has been paid for a large ship, and this will stiffen present rates from Miramichi, Bathurst, Shediac, and other North Shore ports. We have been told 65s. will be freely paid from Miramichi to-day. Perhaps it is in the mind of those who are selling spruce at under £7 to do the freighting by steamers, say 55s. This looks a very nice opertion to the mind or on paper, but steamers to load at deal ports at low rates of freights must be hard up for cargo in the United States ports, in fact cannot get cargo, before they will go to the expense and loss of time in shifting to hring home deals at such a low figure. We do not say steamers will not be got, but will they be chartered at such a rate as will leave a profit to the shipper on sales under £7 c.i.f. ? On the Continent we believe there are several large lines in spruce still to be done. Bordeaux and other Biscayan ports have to be supplied, and here again for what transactions have occurred low prices have been the order of the day. Whether the remaining buyers are going to get their requirements at the same figures is still to be seen, but the divergence between buyers and sellers seems to be about 5c. per standard.

Transactions in Spruce in Ireland have been going on quietly. The most eminent firm in the timber trade in that country, we hear, bought St. Lawrence goods early in the year at £7 10s. c.i.f., and spruce from Miramichi and St. John, we understand, has been sold at equally low prices. Low prices seem to be ruling just now. Do they presage a big stock on the other side.

DIPHTHERIA—that terrible scourage of the present day—attacks chiefly these whose vitality is low and the blood impure. The timely use of Burdock Blood Bitters forstalls the evils of impure blood, and saves doctor's hills. Sample bottles 10 cents.

MENTAL depression, headache, and nervous debility, are speedily remedied by that excellent blood-purifying tonic, Burdock Blood Bitters. The Editor of the Mitchell *Recorder* states that he was cnred of biliousness, liver derangement, and sick headache, by the use of this medicine.

THE editor of the Grand Rapids *Sachem* says :—"We are usually sparing in our enconium towards patent medicines, but observation and enquiry has satisfied us that the preparation of Messrs. T. Milburn & Co., styled 'Burdock Blood Bitters,' as a blood purifying tonic is worthy of the high reputation it has established among the people."

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We represent Four of the Best American Saw Factories

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AMERICAN SAW Co.

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Inserted Tooth,

BIT TOOTH,

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SPECIALLY

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SOLID SAWS

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

☞SAVE YOUR TIMBER

By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute, on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW

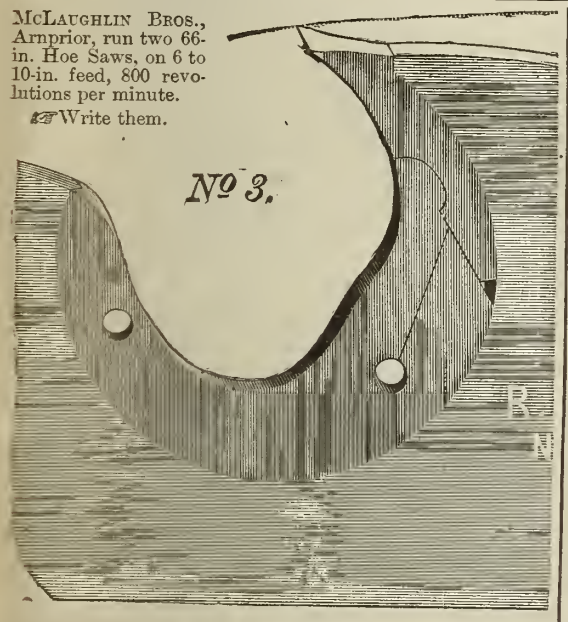
No. 1 TOOTH.

With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. **EXTRA BITS (per 100) No. 1. $9; No. 2,$8.— (per 1000), No. 1, $80, No. 2, $70.**

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

McLAUGHLIN Bros., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

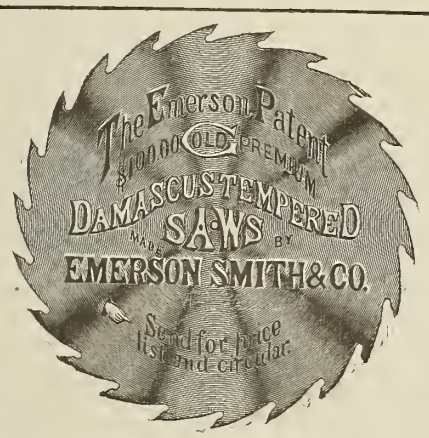
☞Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut repesents usual size tooth, one size larger and smaller made. ☞Send for particulars and prices.

SAVE TIMBER GROW RICH



EMERSON'S EXTRA THIN SOLID SAWS

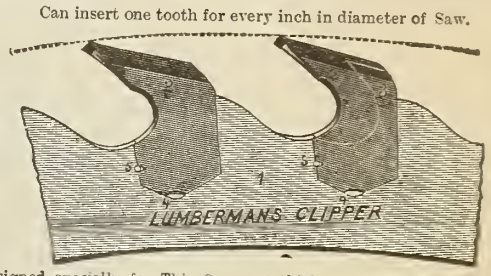
Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56; 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☞NO EXTRA PRICE FOR THIN SAWS.☜

EMERSON'S LUMBERMAN'S CLIPPER SAW

Can insert one tooth for every inch in diameter of Saw.

Extra Teeth 25c. each.



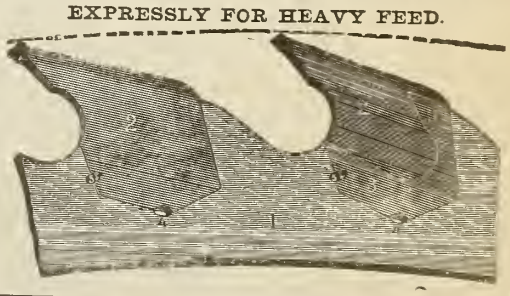
Extra Teeth 25c. each.

Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

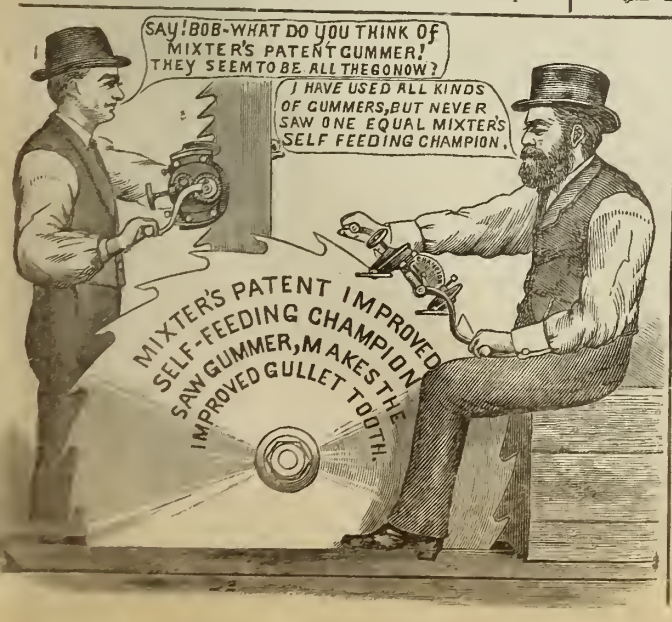
The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.

Extra Teeth 50c. each.

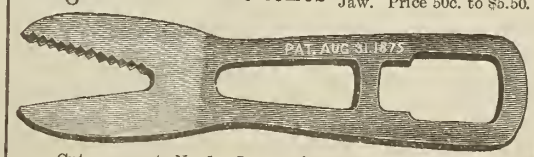


Two and a half inches long



Alligator Jaw Wrenches

5 sizes, grip from ½ to 3 inches, Iron. Solid Steel Jaw. Price 50c. to $5.50.



Cut represents No. 1. Larger sizes have Solid Handles.

WE KEEP IN STOCK ALL KINDS OF

Saw Mill Furnishings

SAW GUMMERS:—Stone's Original, large and smal size Mixter's Self-feeding Champion; Emery Wheels and Stands.

SAW SWAGES:—Hoe's, Emerson's, Mixter's, and American Saw Co.; from $1.50 to $6.00.

SIDE FILES, BELT STUDS, Detachable Belt Fastners.

JARECKI'S PATENT SCREW, PLATE, and PIPE CUTTER, ½ inch to 2 inches, $28.00; smaller ranges in proportion

Band Saws, Scroll Saws, Rainbow Saws for felling trees, American Shingle Saws, Lace Cutters. Cant Hooks. Flue Scrapers, Leather, Cotton and Rubber Belting.

SPECIAL AGENTS FOR GANDY'S PATENT MILL BELT, runs wet or dry; the best and cheapest main driver.

WORTHINGTON and BLAKE'S PATENT STEAM PUMPS. ECONOMIST PLANER and MATCHER COMBINED, large range of work, light, handy, durable, cheap.

Ewart's Detachable Chain For Log Jacks, Refuse Carriers, Sawdust Carriers, all sizes, Live Rolls, Tranfers, Slow Speed Driving Belts, Tie Loaders, Slash Tables, Trimmers, Lumber Sorters, Shingle Block Elevators, and many uses about a saw mill.

HIGH CLASS HEAVY and PORTABLE SAW MILL MACHINERY our Specialty.

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Send for New Price List and Chain Circular. ☞Mention this Paper.

WOOD PAVEMENT.

THE new wood pavement in the Champs Elysees, which extended only half the length of the avenue, has stood the test of an entire winter, and so it is to be laid to the Arc de Triomphe. This pavement has been put down by an English company. The process of putting it down is as follows :—The ground is first excavated about a foot in depth. A layer of stones about the size of walnuts, and mixed with cement, is then laid down. On this a second coat of cement, about an inch in thickness, is carefully spread. The blocks, which are previously prepared by being saturated with some resinous compound into which tar enters largely, are set upon this cement ; they are six inches thick by a foot in length and three and a-half inches in breadth. A space is left between each block, and after they are laid a thick preparation of tar is poured over them, followed by an application of fine gravel. Finally, the interstices are filled with cement.

AMERICAN FORESTRY.

We take the following from the official report of Mr. W. Brown, Professor of Agriculture, Farm Manager, and Experimental Superintendent of the Ontario Agricultural College :—

Two words meaning much—how much no one at present alive will ever realize, and this is what strikes at the root of man's indifference on the subject, that is, that he cannot himself personally hope to receive all the benefits from the conservation of the present trees, and particularly from replanting. American returns must be smart, strong and undoubted ; the idea of permanency in the long after years does not concern us so much as *now* ; we are fond enough of speculating upon cause and effect, and, in this matter, delight in big talk, that indeed does not lack for as much soundness as Europe can produce, but it is talk largely only. Let us add to this phase of our life by submitting some thoughts on such an important subject, with the hope that we are not far off from acting up to what is preached.

THE GENERAL IMPORTANCE OF FORESTRY IN NORTH AMERICA.

It is the experience of the world that more difficulty, in all its forms, is found in reclothing with trees where trees grew before, than it is to plant—not replant—a country for the first time. There is not only the practical fact of succession of cropping in its scientific and natural bearings as similiarly realized, for example, in the products of the farm, but the more serious one of the indifference of its population. It is just a piece of human nature everywhere, that what has been felt as common and everybody's property, is no one's particular business when remedies are asked for in the exigencies of public affairs.

By forestry is meant the whole science and practice of arboriculture ; the conserving, the care-taking, preservation and proper management of existing trees, and the replanting of land for purposes now to be discussed. Speaking generally we are, and we are not deeply concerned, as a nation, in the more modern views of forestry. In Europe it takes a shape that may never be realized here, because of one thing—that one thing is large proprictory, the possessing within *one man's* power all the area and class of soil suitable to profitable production on a large scale, so that even that one man can employ officers and men in such numbers as make profits certain. Cultivated America meantime is so subdivided as to effectually preclude all idea of sufficient massing of woods to receive equal results with Europe—but the day may come. Though not thus situated for forest culture, we are otherwise obliged to give it a place in our rural economy. It is especially applicable to any country that has been a forest by nature, where in some things nature has been unthinkingly trampled upon, and where agricultural progress now demands the aid of her sister science—arboriculture. We are not singular in these matters, and can sympathise with

WHAT IS BEING DONE IN THE CONSERVATION AND REPLANTING OF FORESTS IN OTHER COUNTRIES.

There is no country whatever that has made its agricultural history and does not now complain of want of trees. India, Australia, Europe and the United States, all tell their story of overclearance, of the need of conserving, and of the necessity of replanting. Their greater years than ours has given experience that should encourage, and dismiss all doubts on our part. The effects of judicious re-clothing are already subjects of congratulation, and of yearly revenue in competition with agricultural so much so indeed with some that the other is not uncommon talk with proprietors. India has her standing army of foresters, trained to all cunning in sylvan matters, at European schools ; Australia can already boast of its "Forest Board,"—its conservator of forests, tree nurseries, extensive enclosures planted and to be planted, and a whole system of arboriculture of the most encouraging kind, and the United States, though doing more talk than spade work, are unquestionably on the very margin of a revolution, they have not gone through the forest without "seeing some firewood."

THE OBJECTS OF CONSERVING AND REPLANTING ARE NOT A FEW.

Most people think of trees, first of all, as means of shelter—under several forms. We like shelter for buildings, shade for ourselves, shelter and shade for animals in the field, and shelter for farm crops. These alone would make up a large value in any district where required, and would justify all the cost and subsequent attendance. Yet, we have another aspect of the question that takes an equally strong place in our regard : *Climate* is not alone a matter of great outside causes, but one intimately related to local influences, among which trees are preeminent. We have no time to show how temperature, rain-fall, moisture, and evaporation are directly influenced by a small or large surface of trees—how therefore water in every form is in the hands of trees for local distribution. This second duty of forestry as a science and practice would even seem to swallow up the previous question, and are consequently inducements alone to its prosecution on our part. Were neither of these sufficient, however, to convince, the third great reason for tree cultivation will surely convert even the most stiff-necked among us. It is no matter of doubt, under average conditions, in any country, that tree culture is more profitable as a crop than its own agriculture, year by year, This position is not open to question, but clear and marked in all experience where age has given time for proof. And lastly, some men are satisfied when large expenditure secures what to them is all in all ornament ; and assuredly ornament is value. Who would not give $500 more for a farm where the buildings are set off by just the kind, number and proper position of trees and tree clumps ?

THE AREA OF LAND IN NORTH AMERICA

is not an unknown thing. There is no case in Europe as regards *small proprietory*, having recently occupied a forest country, and where extensive clearings took place for agricultural development. But it is not true that the American continent is now poorly wooded in comparison with other countries ; the United States can show twenty-five, and Canada fifty per cent. of the cultivated districts, as still under trees. This is possibly larger than any other continent, if we except the northern part of Europe, where agriculture is necessarily at a discount, and where forest is practically untouched. What then is the cause of our discontent ? if on an average, one-third of populated North America is still under forest, why do we advocate conserving and re-planting ? or, in other words, what are

THE REQUISITE PROPORTIONS OF TREE SURFACE TO THAT UNDER AGRICULTURAL CROPS ?

This is just one of the things that we do not know, and that we are not likely ever to know as a point for general practical guidance. The conditions affecting climate are so various as affected by latitude, altitude, aspect, soil, sea or lake neighborhood, and vegetation, that no possible number of observations, in any length of time, could say how much for one district is so much for another. However, men do come to realize through science and practice—practice especially—that a farm, or a district, needs the protection in certain places, and thus by such a simple guidance alone, a country could easily be reclothed to the extent required, at least for shelter, if not for regulation of climate, or of sufficient area as a cropping investment ; this point of immediate shelter is, therefore, within everybody's knowledge, and needs no scientific recognition, and should not require any governmental spurring. But the greater field of climate, as an unknown one practically in this relation, is more a national problem, and still very much a scientific enquiry, and what it will have to say in regard to the proportion of trees to farm crops no one can tell. Of course, if we disregard everything but the direct profits from trees as a crop upon land, then we shall likely override all other deductions, and possibly bring back the days of laziness and unhealth. Viewing trees in all their relations, I am of the opinion that upon an average of conditions in Ontario—one-fourth of the land should be under trees, as this is just double what we have at present, there rests the apparent inconsistency of wanting to conserve and replant, all the while that we have double what is needed. This brings out the fact that it is the *irregular distribution* of tree surface in our case which gives trouble, that some parts have more than required, and others have been over-cleared. So then

THE EXISTING CONDITION OF OUR FORESTS

is the very first consideration in this enquiry. What is the condition of all our woodlands, both in the older and newer townships at the present moment, and what should be done with them in order to their best maintenance—such a maintenance as shall secure annual revenue, shelter, and climatic amelioration along with the due agricultural development ?

Outside the lumbering interests there is no enclosing, preserving, caretaking, or conserving in any sense, except the right of individual ownership, some of whom do act the forester, but nationally there is nothing recognized, and hence waste. The average bush of North America is a beautiful sight and yet a sad one. The artist must revel in its variety of form, and foliage, but the fighting for place, the scraggy monarch of three hundred years, smothering even as he dies, scores of plants that but for him would attain to value ; the general want of light and air, and otherwise a decay and loss, recognized only by those who are scientifically and practically foresters. I do not mean that our forests in every case should be managed similiarly to those in Europe, because much of our best timber requires very different conditions, but similar principles ought to guide our management. While then, we owe a steady eye to progressive judicious replanting, it is above all others our first duty to manage well what we do possess. It will be the cheapest, the most rapid, and the most sure method of readjusting matters—along, no doubt with a certain replanting of cleared land. No fear need exist in regard to

THE ADAPTABILITY OF SOILS AND CLIMATE TO RAPID RESULTS,

for nature herself has already shown us what to do both in repeating the same kind of crops, and in the proper rotation of trees, by sections of the country. But that nature has been the best guide in most things is not admitted. We cannot follow her in mode of thinning out so many annually, in making branchless stems, and therefore leafless and shelterless trees, comparatively. It is sound in practice, though not in theory, that ten trees, of certain kinds, standing within a given area, will afford less shelter, less wind break, than three trees of exactly the same sort, properly managed on the like area. We have soils and climates wherewith to do almost anything in tree life—from the pine of the north, which luxuriates in apparently bare rock cleft, to the walnut of the south, that must send its carroty root several feet into a rich soil. European forest revenue begins, as an average, fifteen years after planting ; that of America ten years afterwards.

As the subject grows upon our attention, we are next concerned with

WHAT PARTS OF THE COUNTRY SHOULD BE CONSERVED OR REPLANTED.

And in this part of the study it is obvious that our views cannot be confined to single farms, or even special sections. Referring, as we must, to the great over ruling influences, as previously indicated, we have to deal with geographical features that may embrace thousands of acres that have to be subserved by one, or more, massing of trees. Just where to conserve or replant, how much on the spot, or spots, in what particular form—belt, clump, or block—and with what kinds of trees, so as to gather and dispense all the virtues that trees are known to possess, is the great problem of the future. To say that we should replant only our less valuable soils is nonsense, though sensible enough from the cultivated standpoint ; that high lands should be conserved or reclad as against lower parts is largely true, though not generally applicable, and that conserving and replanting must go hand in hand, and take place anywhere as found necessary through experience, is correct in every sense.

Following this view of the subject there is naturally that of

SUITABILITY OF CERTAIN KINDS AND FORMS OF TREES FOR SPECIAL PURPOSES,

whether for neighborhood of dwelling, roadside shade, shelter-belts, field clumps, or for more extensive planting, efficiency and permanency in every example are the primary considerations. It is not difficult, because experience is extensive, to decide on those species of trees for roadside, and house shelter, but much has not been done for the others, and so some advice will not be out of place.

To attain all the objects desired in replanting it is obvious that many varieties together in one clump or plantation would be indispensible ; early shelter and rapid returns for the money invested would be best secured by certain kinds of trees more than others ; such trees would also serve as nurses to others, and permanency in their case would not be wanted, but we would desire in their character a full and spreading foliage coming early and remaining late in the season, or even throughout the winter, to attain size in ten or fifteen years, and to be of a quality that would fetch a handsome revenue per acre for the period since planting. The removal of these gradually from the plantation as required by the progress of the other sorts would form, as it does now in other countries, a nice scientific and practical study. The second class of trees in such a plantation should be of a less spreading habit and more of upright growth so as not to interfere too early with the first and third classes ; they should also begin to offer some revenue at thirty years, because the most of them would have to give place to the third or standard class, in about fifty years from the date of planting. In all well regulated planting one set of trees is held as those to remain as long as good management, their own natural habits, and a proper time to harvest without loss, will allow. These are the third class referred to, and necessarily we desire a slower growth, a habit that will not spoil by close neighborhood—a sociable plant therefore, giving high value when cut, maturing late, holding its maturity long, giving low branches and many leaves, a gatherer and holder of atmospheric moisture, a wind sifter, and holding electric communication with cloud and other trees at a distance. We have such trees of several varieties.

The preparation of the land, detailed method of planting, distance apart of trees, including fencing, drainage, knowledge of enemies and friends in nature, and all the management throughout in order to attain the highest results are too much for my time on this occasion.

The farmer's view of a wood, is grazing. Modern arboriculture does not recommend it in Europe at any stage of growth, yet, with us in the more difficult maintenance of permanent pasture, I see no objection to the admission of sheep during the second, and cattle during the late cropping periods.

The duty of legislatures, in regard to existing woodlands, and replanting, is being pressed upon our attention from various quarters, and unquestionably ere long every progressive country must take some action. How much to do, and what not to interfere with, will make the bill. That the Ontario Government has a warm side to trees is well known, and it is to be hoped that whatever they do it will be early, full, good, rapid and permanent.

American Forestry will have no place in all its scientific and practical value until one of two things be accomplished : one is the conviction on the part of our farmers, of the necessity of conserving and replanting, therefore their

education up to these, and the other is the power by Government to resume parts of the country for conserving and replanting. Both will be difficult; the former would be the slower, but eventually the most thorough because of self-interest; the latter would be more immediate and possibly less efficient, practically, though scientifically better applied. No large number of various interests could be so well arranged as by a company, and therefore Government will have to become foresters in all the many details of the profession. Were a properly conducted system of forestry began in 1884, the results would be so strong in the year 1900 as to astonish. It would possibly change much of our present agriculture practice, it would certainly enhance the production of winter wheat to an immense extent; it would enable us to graze nearly two for one by checking rapid evaporation and encouraging permanent pasture; it would largely nullify droughts, perpetuate streams, and generally make climate more regular and reliable.

To those acquainted with Arboriculture as a profession in all its national bearings, an annual expenditure of $50,000 has in other countries made an *annual* crop revenue of $25,000 within fifteen years, in addition to the *triple* value of climatic amelioration.

THE BOATMEN'S STRIKE.

The Ottawa correspondent of the *Mail* of May 15th says:—The American boatmen who made an organized demand a few days ago for an increase in shipping rates between this port and New York evince a strong determination to secure what they demand. There are 43 boats now lying at Perley & Pattee's wharf, near Blyth's point, awaiting the result of the lock-out. On Saturday at a meeting of boatmen, the following captains were appointed to confer with the shippers:—Messrs Dan. Donoghue, W. Lily, D. Peachy and Jules Fulton. This morning they received an offer of $3.75 per thousand feet, an increase of twenty-five cents over last season. This offer was refused, the boatmen holding out for $4 per thousand. It is said that the boatmen can under no circumstances make two ends meet by the old rates. Their expenses are greater this season, and at the rate demanded they can barely keep things going. There are over twenty boats at Montreal at present awaiting word from Ottawa to come up for loads. If the increase is not granted they will not come. There are over 600 boats in the recently formed organization, and the strikers here have received every encouragement to hold out. There has been no tow of boats from Ottawa as yet for the States this season. It is a question whether lumber shippers will concede the demand. The bulk of the lumber to be shipped this season was purchased last year, and the freight rates then existing were taken as a basis of their calculation. The buyers are consequently very materially affected by the demand for an increase, which amounts to a large sum when the enormous quantity to be shipped is considered. They were willing, however, to meet the boatmen half way, and increase the rates 25 cents per thousand.

LATER.—The demands of the striking American boatmen have been acceded to, and they commenced loading on Tuesday, May 15th. The rate received will be $4 per thousand feet.

RAFTING IN QUEBEC.

A recent number of the Montreal *Witness* says:—The direction of the wind throughout last night and to day has been very favourable to the floating of timber rafts down the river, the result being that large numbers have gone past the city *en route* for Quebec within the last twelve hours or so. About noon to-day a fleet of ten very long rafts with all sails set passed down, the high wind at the time, coupled with the strong arms of the oarsmen, propelling them at a prodigious speed. When opposite the harbour they cheered vociferously and waved their flags, which salute was returned by the sailors of several ships. During the next few days the quantity of timber sent down will doubtless be large.

A raft of some sixty cribs of timber and having between fifty and sixty men on board, was descending the Lachine Rapids this afternoon, when it struck upon a rock about the middle of the current. Half the raft was shattered to pieces and separated; the timber went down the stream. Strange to say none of the men were lost.

YOUNGS' POINT.

From Our Own Correspondent.

THE FIRST DRIVE.—The first saw log drive this season passed through here last week *en route* to the mills of Mr. Fowlds at Hastings; John Newall is foreman. They were very fine logs and numbered 6,000. They came down Jack's Creek, being cut in the Township of Methuen.

SAW LOG DRIVES.—Mr. Geo. Chalmers' two drives are getting on well so far. P. Cassidy's drive out of the Township of Methuen has got out as far as Boschink Narrows, and A. Wynn's drive got out of Eel's Lake into Eel's Creek last week.

THE SAW MILLS.—Mr. P. Young, jr., has now commenced work in earnest for the season with a good gang of men to cut ties, lumber, etc. All kinds of lumber can be purchased at the mills here for buildings and other purposes.

Timber Cutting Permits.

OTTAWA, May 16.—A return brought down to-day relating to the grant of permission to cut timber or to mine on lands within the territory now in dispute with Ontario shows that from August, 1878, to March 15, 1883, there were thirty-five permits to cut timber granted. The total amount of dues received by the Government in this period was $21,690, of which $16,416 was from the Canadian Pacific Railway from its permit to cut timber for twenty miles on each side of the railway eastward from Brokenhead river. No permits or leases for mining have been issued. The permit of the Canada Pacific Railway Company was on October 21, 1882, renewed until November 1, 1883. The other permits were for limited quantities.

Saw Mill Burned at Chatham, N. B.

CHATHAM, N. B., May 12.—The water mill opposite Chatham was burned this morning at five o'clock. It was owned by Guy Bevan & Co. and Wm. Richards. About a million and a half of deals on the wharf were saved. The mill was the oldest on the Miramichi, and had been running about three weeks this season. The origin of the fire is unknown. Bevans and Richards paid, it is said, $24,000 for the property. The mill was insured for $5,000 in the Queen, $5,000 in the Royal, and $2,000 in the Canadian. There may be insurance in England also.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

A WONDERFUL CHANGE.—Rev. W. E. Gifford, while pastor of M. E. Church, Bothwell, suffered from chronic dyspepsia so badly as to render his life almost a burden. Three bottles of Burdock Blood Bitters cured him.

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Loss of Appetite,
Indigestion, Sour Stomach,
Habitual Costiveness,
Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

Short of Logs.

THE mill of Williams Bros., at Saginaw, shut down last week for want of logs and it will be found before the sawing season closes many others will be compelled to similar action; and the mill alluded to is not the only one thus far which has done so. In the face of such facts, and that log running is impossible in some of the tributary streams, those papers which are predicting that there will be plenty of logs to supply the demands of the Saginaw River mills, and that the cut of the river will equal that of last year, while commencing about five weeks later than in 1882, are exhibiting a great lack of appreciation of the situation, and a total disregard of any foundation for such an assertion. With the Tittabawassee 300,000.000 feet short of the usual amount of logs left over in the boom limits and water already at a low stage, the utter improbability of a full supply of logs is too apparent for discussion.—*Lumberman's Gazette.*

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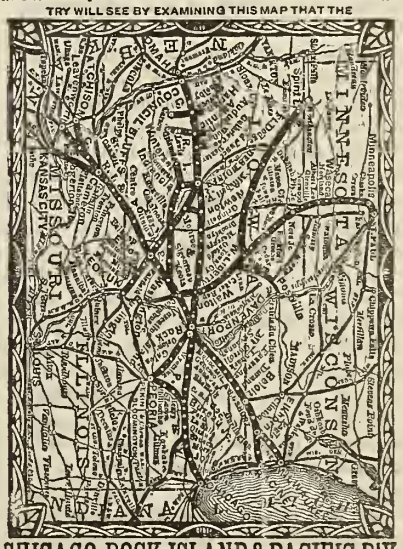
A MAN
WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



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All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. JUNE 1, 1883.

A BLACK walnut tree of average size reduced to gun stocks is worth from $1,000 to $1,500.

THE Belleville *Intelligencer* says that a force of men is now rafting timber at the G. J. R. dock for Mr. Boyd, of Bobcaygeon. The raft will consist of two drams, which contain about 60,000 feet, and will be shipped for Quebec at the close of the week.

THE Newmarket *Era* says that another machine has been added to the large and increasing manufactory of Messrs. W. Cane & Son, in the shape of a double bolter, by the aid of which two shingles can be cut at once, thus doubling the capacity.

THE drivers in the Michigan streams are favored with water to a much greater extent than are their co-laborers in Minnesota and Wisconsin. In the two last named states there are a great many drives hung up, and further progress will largely depend upon spring rains.

WE have received from Mr. C. H. Clark, of Barrie, some beautiful specimens of Spurr's Papered Veneers, to take the place of ordinary paperhanging while giving the effect of woodwork for either walls or ceilings. These veneers seem admirably adapted for the purpose; they are no thicker, including both wood and paper, than the common hangings, while the grain of the great variety of wood is beautifully displayed. We cannot speak personally as to their durability, but there is very strong testimony in their favor.

THE Bay City *Lumberman's Gazette* says :—At some of the large lumber distributing centres, the newspapers are coming to a realization of the true situation of affairs at the initial points, and are giving the signals for a stiffening of values, in order to meet the inevitable with some show of complacency. They are evidently beginning to appreciate the facts stated several weeks ago by us that the exorbitant and almost unrivalled call for lumber to meet the demands of building operations must necessarily stiffen values, as well as brace up the spinal columns of the manufacturers.

THE best authorities in Arizona estimate that the territorial plateau, which embraces six thousand square miles, will yield 20,000,000 feet of lumber. The timber is said to be of the finest quality, and if protected by the Government will be source of great wealth to the Territory.

A cablegram has been received from Paris announcing that Mr. L. A. Senecal had made another grand *coup* there by the sale of the Hall estate, comprising timber limits, mills, and millions of acres of land, to the new French Colonization Company, which he had so much trouble in getting chartered at the last session of the local Legislature.

THE different saw mills along the Pacific coast of British Columbia are running night and day to supply the demand for lumber for the erection of new canneries and buildings. On account of so much work going on along the coast, the Indians are looking forward toward obtaining high wages during the fishing season, and are very scarce already.

THE *Lumberman's Gazette* says :—The Wisconsin drives are in about the same condition as those of Michigan. Unless there should come heavy rains, many of the logs will be hung up. The Chippewa *Herald* of a recent date says that of the 700,000,000 feet put in only 200,000,000 had been got out, and that it would take a week's heavy rain to insure the drive. As the rain has not made its appearance, the prospects on the Chippewa must not be very flattering.

THE Grand Forks *Herald* says :—The lumbering outlook in northern Minnesota is not bright. According to the Brainerd *Dispatch*, which is in a position to know, about every drive in northern Minnesota is hung up high and dry, except those on the Rum river and they are moving very slowly. If it don't rain pretty soon and swell the waters on the various small streams on which the logs are lying still, lumber is going to be lumber this season and don't forget that for a moment.

THE Amsterdam, N. Y., *Recorder*, says that by the law which has passed the legislature, prohibiting the sale of State lands containing forests, the lumber trade in the Adirondack woods, of which Gloversville is the shipping point, will almost cease in two or three years, and will ultimately throw out of employment a large number of men. The bill was passed in order to protect the water supply of the Hudson and Mohawk Rivers, it having been asserted that if the wholesale destruction of the northern timber lands continued for a few years longer, navigation on the Hudson would only be possible as far north as the city of Hudson.

THE Belleville *Intelligencer* of May 22, says : A party of river drivers arrived here this morning and will leave for their homes at Sorel, Quebec, to-night. They have been in the woods seven months. Reports from the Beaver Creek drive are very encouraging, as excellent progress is being made. It is expected the drive will reach Trenton at an earlier date than any that has yet passed through Beaver Creek. The head of the first drive on the Moira is in the dead water on this side of O'Brien's bridge, and the tail passed Tweed yesterday. The wind aided the rivermen in there work there to-day, and it is probable that the logs will begin to arrive here on Thursday.

A TRESTLE-WORK being constructed for a railroad across Lake Pontchartrain, Louisiana, is to be twenty-one and a half miles in length. The distance comprises thirteen and a half miles from People's Avenue Canal to the Point, five and three quarter miles across the lake, and two and four-tenth miles from the north shore. All of the piling along the southern shore, with the exception of about one mile, has been driven, and this division will be completed by July 1. Of the piling in the lake two and a quarter miles have been driven, and one mile of the work is completed. The trestle on the north shore has been finished some time, and the rails are laid nine miles. The piles average sixty feet long, and are driven about forty feet.

GRAVENHURST.

From Our Own Correspondent.

MAY 22.—The season has fairly opened here, and the saw mills, with the exception of one, have commenced operations. The spring has been a very backward one; the ice remaining in the lakes as late as 16th inst. This has helped to retard driving, as after getting the logs down to some of the smaller lakes the lumbermen were unable to get them any further until the ice went off. River driving is now well advanced however, the continued rains and cool weather being very favorable to this important operation, an operation which has come to be a very expensive one in this region of late years, owing to the long distance the logs have to be driven, the smallness and crookedness of the streams, the beds of which are also much obstructed by rocks, so that unless the season proves extremely favorable there are always a large quantity of logs hung up. During the past winter very heavy stocks have been taken out, probably the heaviest in the history of Muskoka, and should they be all got down to the mills the present season bids fair to surpass any previous season in the manufacture of lumber to the extent of about ten million feet. There are now eleven saw mills in and around Gravenhurst, the estimated cut for this season being 40,000,000 feet of lumber and 60,000,000 shingles. There are also several small mills up the lakes cutting three or four million feet of lumber which will be shipped from this point.

A large portion of last season's cut still remains at the mills, this is, however, all in the hands of the dealers who are shipping it as fast as they can procure cars from the railway company. Lumbermen say that their stocks will cost them this year at least one dollar per M. more than last year owning to the severity of the winter, and the high rate of wages, and very few stocks have been sold yet, as the dealers seem indisposed to offer higher prices than were given last year.

Several of the mills have put in new and improved machinery this spring, thereby adding considerably to their capacity.

The Woodstock Lumber company have sold their mill and limits to Messrs. Van Leek & Co., of Port Burwell, for $90,000, who have taken possession and intend running the mill to its full capacity.

There are also one or two new mills projected here, of which I will give you particulars in a future letter.

WINNIPEG.

From Our Own Correspondent.

MAY, 23.—There is a marked change in the lumber trade of this place as compared with last season. We were then importing four-fifths of the required stock, principally from St. Paul. Our three good mills were not then constructed; all three were started last fall and run between one and two months. This spring they are again running, with the exception of the Winnipeg Lumbering Company's Mill, which is having a new engine and boiler placed in.

Their cutting capabilities are nearly equal to the present demand of the town, which, though still large, is immensely less than the exceptional requirements of last season. As the building season advances more will be required. There is also a rapidly increasing demand along the line of the C. P. R. Southern Manitoba too is a fine growing market. It is quite evident, however, that the home supply will at least be nearly equal to the home demand. The spruce lumber and timber from Lake Winnipeg contributes its small but important share. The main dependence, however, will be on the mills in the Keewatin district, several new ones of large cutting capacity have lately been built, and one or two others are in progress of construction. There are also small mills to the westward along the line of settlement where ever there are patches of forest large enough to warrant their building, so that the North-West can in a great measure rely upon its own resources for its timber and lumber; its success would be fully assured if it could carry the same self dependence into its many other industrial departments, but time and patience, with North-West energy, will accomplish much.

Mill-men here have shared in a very prevalent impression, that if you want anything good you must go to the States for it. Accordingly the Winnipeg and Rainy Lake Lumber Companies each went to their chosen American manufacturers for their engines and mill machinery. D. E. Sprague, Esq., however, had faith in Canadian mechanics, the design, construction and management of the mill being wholly Canadian. Mr. Wm. Hamilton, of the good town of Peterborough, supplying the machinery and motive power. The result vindicates the good judgment of the proprietor. While we would offer no disparagement to the other mills which are certainly excellent, yet it is generally conceded that Mr. Sprague has the neatest, best arranged, and finest working mill of the three. As a lumber manufacturing investment it stands No. 1.

It is also gratifying to find that the impression referred to is being corrected in more instances than this.

NORTH-WEST TIMBER.

The timber supplies of the Canadian North-west are beginning to attract the attention of American lumber manufacturers, and it is not at all unlikely that considerable capital from the south side of the boundary line will be employed within a few years in developing the resources of this country. Americans have opened their eyes to the fact that with railway and water communication between the North-west and the Ontario lumber districts, they must soon lose the extensive market they have hitherto had in Manitoba. Had they only the reduced freights, and quicker transportation furnished by the opening of the Thunder Bay route to compete with there would be little fear but they would still manage to maintain a footing in this market. But when a tariff is taken into consideration the case is entirely altered, and the supplying of Manitoba and the North-west will soon be beyond even the elastic power of the American manufacturers' price doctoring. It would be altogether out of the limit of American trade ingenuity to suppose that these manufacturers would quietly yield up their privileges in such a valuable and increasing trade field, without exhausting every plan for continuing competition. Logs are admitted duty free in the Dominion, but to float them down the Red River into Canadian territory, and for Canadian mills to saw, savors too much of dealing in raw material to suit the ideas of the enterprising class who are connected with the lumber industry in the North-western States. As a natural consequence American lumbermen are casting their eyes towards the timber fields of the North-west, with a share of which as resources in raw material they can take their place among the manufacturers of this country.

It is a fact that the timber of this country, or at least that portion of it fit for lumber manufacture, has as yet been very little drawn upon. Hitherto lumbering has been little more than a system of culling from the best districts within easy reach of Winnipeg. The lower portions of Lake Winnipeg were until very lately the only locality where operations were carried on to any extent, and these have only recently been supplemented by cutting in the Lake of the Woods country. As yet the vast timber fields on the upper Lake Winnipeg, where the finest spruce limits in the Northwest are known to exist are almost untouched, although the establishing of a more extensive system of navigation on that lake is all that is necessary to bring these timber lands within easy reach of the Manitoba lumber market. It can scarcely be expected, with the present system of rapid development, and ever increasing demand for lumber which is now going on in the Northwest, these timber resources will long remain untouched, and it is just possible that American capital and American enterprise will soon assist much in their development.

A few days ago Mr. Platt B. Walker, editor and publisher of the Mississippi Valley *Lumberman*, was in Winnipeg accompanied by his brother of the well-known Minneapolis lumber firm of Camp & Walker, with a view of inquiring into the timber resources of this country. This visit was only a preliminary one we understand, and as soon as lake navigation opens he intends to return and arrange for a system of lumber prospecting on a large scale. No man

is better able to form a correct idea of the lumber resources of a country, and before the close of the present season he will no doubt be in a position, to furnish reliable information regarding those of the Northwest. Numbers of Americans besides Mr. Walker have contemplated such an undertaking, and it is not at all unlikely, that during the summer months quite a few lumber exploring parties from the United States will be at work on lake Winnipeg and other timber districts. Should these explorations result in the discovery of valuable lumber fields, they will soon be brought under the influence of the lumberman's axe, and prove a source of great profit to those who engage in their development. It would be rather a takedown to Canadian capitalists looking for Northwestern investments, if these enterprising Americans should open up fields, that would give rich returns, and greatly extend a valuable industry in the country, while they—the Canadians—were bothering with paper-town sites, worthless charters for imaginary railroads and such like; and there is a strong probability that such will be the case. Practical manufacturing enterprise cannot but produce satisfactory results, especially when prosecuted in such a promising field as the timber resources of the Canadian Northwest.—*Winnipeg Commercial.*

HARDWOOD UTILIZED.

Mr. John Shetterly, a manufacturer of hardwood lumber, at New Troy, Mich., tells the *Northwestern Lumberman* that he saws beech and elm principally, and has placed something over 1,000,000 feet of beech with consumers in Chicago. The beech of his section is chiefly the red variety, the white being more hard and warpy, and worth about two dollars per thousand less in the market. Beech is becoming a more important factor in the hardwood trade, on account of its cheapness. It is a very durable wood, and has a fine grain. It is principally used in the making of school furniture, chairs, bedsteads, etc., and when quarter-sawed is considerably used for finishing. To some extent it has been employed in floors, and by many it is thought to be equal to maple for that purpose. The furniture makers are using much more beech now than was the case a few years ago. The red kind is a very handsome wood, and can be made to imitate cherry. The trees in the region of New Troy afford on an average about 40 to 50 feet in length of logs. Red beech is worth $15, log run, and firsts and seconds sell for upwards of $17. Beech stumpage is worth from $1 to $1.50. Elm commands somewhat better prices. Mr. Shetterly aims to obtain all the good lumber possible from a log, and to make clear clear, and culls culls. The frequent turning of a log, though requiring time, he holds essential to the securing of the largest amount of good lumber. In another respect his example is worthy of emulation by others of his craft. He ships his good lumber to market, and keeps the culls at home, realizing the fact that there is a good demand for a decent article, and that the market is overstocked with poor lumber.

CHICAGO BLOCKADED.

The *Northwestern Lumberman* of May 19th says:—From Thursday to Saturday last, inclusive, a serious and damaging blockade existed at the mouth of the harbor. The Wocoken, a huge steamer, became unmanageable, owing to the very rapid current which the high water in the river had produced, and though in charge of two tugs, it nevertheless swung across the stream at the north pier. So tightly was it wedged in, that it could not be stirred, though everything possible was done, and a fleet of tugs was engaged. Neither steam nor strategy had any effect. Vessels were arriving constantly, but were unable to proceed up the river. It was thought that the Wocoken would have to be lightered before she could be got off, but by diligent effort during Friday forenoon she was pulled out of the mud, and the blockade was open. The jubilancy of the vesselmen was of short duration, however. In about a half hour the Tacoma, another huge steamer, grain-laden, repeated the exploit, and was soon jammed fast across the river, with her nose thrust into the Illinois Central slip, and her stern resting firmly against the dock of the Peshtigo Company. The united efforts of a half dozen tugs failed to budge her. She was even more firmly fixed than the Wocoken had been. The puffing and tugging continued all the afternoon, and till Saturday afternoon, with no success. About a dozen tugs and steamers were at work, and the vicinity was overspread with a dense cloud of smoke, which settled pown on the scene like a black fog, the smutty blasts blowing into the faces of the perspiring workmen and the streams of curious spectators who thronged the slips for three days. The masts and smokestacks of some 90 craft towered in the air like the skeleton trunks of a wierd forest. One half of the vessels were loaded with lumber and posts, the latter cargoes being strikingly numerous. Since it would be necessary to send to Milwaukee for a floating transfer elevator to lighter the Tacoma, if this expediency was resorted to, a diligent endeavor was made to bring her out. At one time nearly a score of propellers and tugs were at work, with no success. Purchases were rigged, and finally, along in the evening, a happy combination was hit upon, a four-fold purchase slowly starting the Tacoma from her stubbornly held position. When once under headway she was readily towed into the Iliinois Central slip, and the blockade was raised. Then the tugs had active work, and the craft began moving up the river, keeping the bridge-tenders sweating, and the pedestrians swearing. The Tacoma, though not as badly damaged as was supposed, had to go into dry-dock. The general loss to business on account of the embargo is very heavy, and has been estimated at nearly $500,000. The lumber market was bare and desolate during the blockade. The damage to the Tacoma has latterly been estimated at $3,000.

FOREST FIRES.

WOODSVILLE, N. H., May 19.—Baldwin's saw-mill and two million feet of lumber, also the depot, water-house, and 500 cords of wood, the property of the Montpelier and Wells River railroad, with two cars, have been burned. Woodland fires are raging in Twin Mountain, Jefferson, and Warren Summit, and much damage is anticipated. Thousands of acres have already been burned over. A large force of men are fighting the flames. The losses on standing and cut timber are already large.

A despatch from Plymouth says forest fires are raging fiercely on Mount Webster and Blueberry mountain, and a brisk wind is blowing. Nine hundred acres have been burned over, and a thousand cords of cut wood are imperilled. A special train has gone from here to Warren Summit with two hundred men to check the fire and to protect railroad property. Another fire is reported in the vicinity of North Concord.

TAUNTON, Mass., May 19.—Fifty acres of valuable woodland between here and Middleboro' were burned to-day. A large woodland fire is now raging in the west part of Dighton.

YAPHANK, L. I,, May 20.—Five destructive forest fires have been burning in the woods surrounding Yaphank since the 10th inst.

MONTPELIER, Vt., May 20.—The most disastrous forest fire that ever occurred in Vermont started yesterday in the vicinity of Groton. An immense tract has been burned over and a large amount of property destroyed. The loss is estimated at $150,000.

LANCASTER, N. H., May 20.—Fire started in the woods on Cherry mountain on Saturday, and spread over a large territory, causing a loss of $10,000 worth of timber. Wickers' saw-mill and boarding house at Jefferson, with a large quantity of logs and manufactured lumber, and Willoughby and Gale's coal kilns, with 2,000 cords of wood, were burned.

THE *Northwestern Lumberman* says:—Cedar is one of the woods that many pine operators are holding in reserve. On one stream in Michigan a large saw-mill concern owns a large body of cedar, but they will not sell a stick of it, and at present have no occasion to cut it themselves. They think it is good property to hold on to, considering it cost them but little, and undoubtedly they are right. When the company's pine is exhausted the cedar will come in play. This is but one of many similar cases.

Second Growth Pine.

Not a small part of central and southern New England, no longer profitable for agriculture, is now growing up with white pine, and this, if it can only be protected, will, it is thought, soon exceed in value the net profit upon all the New England farms. In some parts of New England, this second growth of pine has been growing for a considerable time, and has already given rise to large and profitable industries. The value of logs cut in Maesachusetts during the census year reached nearly $2,000,000. At least one-half of these logs were of second growth pine. More than 100,000,000 feet of second growth pine were sawed during the same year in Vermont and New Hampshire, and nearly, if not quite, as much more in Maine. —*N. Y. Lumber Trade Review.*

Cheap Transportation.

The *International* of Emerson, Manitoba, hold the right view as to cheap transportation. It says:—"Carney & Watson, lumber dealers, are loading their large barge with laths for down-river points. The barge will be floated down river. Cheap locomotion and transportation. Nothing like having a navigable river for a transportation highway."

A Quebec despatch says that most of the timber cut this season on the St. Maurice and Batiscan rivers will be stuck this year in the drive.

IN a recent discussion on forestry Mr. Hough has suggested the possibility of training trees so that they may present a showy and a novel grain in veneer.

THE *Northwestern Lumberman* says:—A report reaches us from Arkansas that the owners of pine lands in the southwestern part of that state are considerably agitated by the ravages of some sort of a bug that strips the pine trees of all their foliage, and leaves them looking apparently as though they were dead. Some claim that the trees will die, whilst others think they will not be materially injured. The worm, it is said, as soon as its work of destruction is over, drops to the ground and dies; so that it appears pine spines don't agree with it, and it no doubt will soon tire of that sort of diet.

A NEW YORK correspondent of the *Northwestern Lumberman* says:—There is but little eastern spruce arriving as yet, and the supplies at the yards are being reduced. No changes have yet been made in prices. If values are held firm, or advanced, it will be so through a power that is stronger than the association recently formed. There is a drouth in Maine, and the rivers down which spruce is brought to market are at a very low stage of water. It is said by those who are conversant with the country that they are as scant of water as they are usually during the driest days of summer. This will hang up vast quantities of logs, and if enough do not come down to meet the demand prices will naturally stiffen. There is no abundant supply to draw from in this market at the present time, but if there comes plenty of water in the eastern rivers there will be large quantities soon ready to push into market, and then prices may suffer.

A BOSTON correspondent of the *Northwestern Lumberman* says:—From conversation with several of our largest wholesalers the past week, I can sum up the several opinions of trade about as follows: Every one asserted that the trade has been held back fully a month by bad weather, but that from this time on it will increase and hold good until well into the fall. No one predicts a boom, but there is to be a steady, general demand for all kinds of building and manufacturing lumber. I talked with a reliable party yesterday, who has just returned from Bangor. He reports the prospects of getting in the spruce logs as very discouraging. The frost went out of the ground so gradually that the melted snow soaked into the ground, instead of swelling the small streams, and unless there are heavy rains, sufficient to cause a rise of the water in the branch streams, it will be impossible to get in the logs, and there must necessarily be a scarcity. This will have a tendency to still further advance in price.

WATER POWER

TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND

1d86 LAKEFIELD, ONT. w15l9

A RARE CHANCE!

Valuable Steam Saw-Mill

FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings through piling Grounds connected with main line of Canada Pacific Railway. The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waha Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, Seigneurs Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

ALEX. HECK,
6l11 Ottawa.

SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞Canada Pacific Railway now running through part of the property.

For full particulars address:—

WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

LACHINE CANAL.

NOTICE TO CONTRACTORS.

SEALED TENDERS, addressed to the under-signed, and endorsed "Tender for the Formation of Basins near St. Gabriel Locks," will he received at this office until the arrival of the Eastern and Western mails on WEDNESDAY, THE 6TH DAY OF JUNE next, for the formation of TWO SLIPS or BASINS, on the north side of the Lachine Canal, at Montreal.

A plan and specification of the work to he done can be seen at this office, and at the Lachine Canal Office, Montreal, on the after TUESDAY, the 22nd day of MAY next, at either of which places printed forms of tender can be ohtained.

Contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms.

An accepted Bank cheque for sum of $2,000,must accompany each tender, which sum shall he forfeited, if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer suhmitted. The cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,

A. P. BRADLEY.
Secretary.

Dept. of Railways and Canals,
Ottawa, 21st April 1883. 6d100-2l12

REST not, life is sweeping by, go and dare before you die, something mighty and suhlime leave hehind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

GOVERNMENT SLIDES ACT.

The following Act is so important to lumber- that we give it in full :

An Act to make further provision respecting the regulation and collection of tolls on Government timber slides and other works constructed to facilitate the transmission of timber, lumber and saw-logs.

Whereas it is necessary to make more ample provision respecting the regulation of tolls imposed for the use of slides and other works under the control of the Government of Canada, and used for the purpose of facilitating the transmission of timber and lumber down rivers and streams, and also respecting the collection of such tolls, and the imposition and enforcement of penalties under the law or any regulation made thereunder; therefore Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows :—

1. In this Act the term "Works" means and includes the slides, booms, dams, bulkheads, and other works and improvements for facilitating the transmission of timber and lumber down any river or stream, which are under the control of the Government of Canada ; and the term "Collector of tolls and dues," means and includes every officer authorized by competent authority to receive any tolls, dues, or charges whatsoever, payable by any person using or taking advantage of any works to which this Act applies.

2. All works to which this Act applies shall, as respects the construction, repair, maintenance and management thereof, be under the control of the Department of Public Works, and as respects the collection of tolls and dues on any timber, lumber or saw-logs passing through or using the said works, the same shall be under the control of the Department of Inland Revenue.

3. In addition to the powers now in him vested by law in that behalf, the Governor in Council may, from time to time make, revoke, alter or amend regulations as respects matters relating to such works as aforesaid, and not specially provided for by this or any other Act, and for fixing the rates of toll, and the dues to be charged for the use of any such works, or of any series of such works (the rates in such latter case to be denominated through rates) and providing for the manner in which such tolls and dues shall be ascertained and collected, and also for imposing fines and penalties for any infraction of such regulations, not exceeding in any one case *five hundred dollars* ; and such fines and penalties shall be recoverable in such manner as shall be stated in the regulations imposing the same.

2. And the Governor in Council may make regulations authorizing a collector of tolls and dues on any works, in any case or class of cases to be specified in the regulation, to require any assertion of fact or any statement in relation to any matter to which this Act or any regulation made under it relates, to be verified by the oath of the person making such assertion of fact or statement; and the oath so authorized may be administered by any Judge or Clerk of any County or Circuit Court, or any Justice of the Peace or any Commissioner for taking affidavits for use in any Court in Canada, or by the collector of tolls and dues.

4. All tolls and dues chargeable for the transmission of timber, lumber or saw logs through or over any works shall be a first charge or lien on all or any part of such timber, lumber or saw-logs (each part being liable for the whole), and the same shall be liable for the payment of the tolls and dues thereon, so long as, and wheresoever, the said timber, or any part of it, may be found, whether it be, or be not, converted into deals or boards ; and all officers or agents employed in the collection of such tolls and dues, and all persons acting under the authority of such officers or agents may follow all such timber and may seize and detain the same wherever it be found, until the dues thereon are paid or secured as provided by this Act or by any regulation made thereunder ; and no transfer, assignment, sale, mortgage or delivery to another party, or change of owner, shall affect the claim or lien of the Crown on any timber, lumber or saw-logs, or sawn lumber, in respect of which, or of the timber, lumber or saw-logs out of which such sawn lumber was manufactured, any tolls or dues for the use of any works remain due and unpaid, saving always the right of the innocent holder to any remedy which he may have at law against the person from whom he received such timber, lumber or saw-logs, or the product thereof: Provided always, that no part of any such timber, lumber, saw-logs, or the product thereof, when *bona fide* sold, assigned, or transferred, shall be liable for more than double the tolls or dues accrued, in proportion to the amount chargeable upon the whole, upon such timber, lumber or saw-logs, or upon the timber, lumber or saw-logs from which the product was manufactured, in addition to the costs, if any, incurred in connection therewith.

2. And if any timber, lumber or saw-logs, in respect of which tolls or dues are chargeable, have been converted into sawn lumber and placed in any yard or piling ground with other sawn lumber, in such way that its identity cannot be ascertained, then, and in that case, all the sawn lumber in such yard or piling ground shall be deemed to be the product of timber, lumber or saw-logs which have passed over or through works to which this Act applies, and shall be liable for all tolls and dues with which the timber, lumber or saw-logs, the product of which has been so placed with other sawn lumber in such yard or piling ground, are chargeable.

5. If any timber. lumber or saw-logs, or product thereof, so seized and detained for non-payment of tolls, dues, penalties and expenses remain more than thirty days in the custody of the collector or person appointed to guard the same, without the tolls, dues, penalties and expenses being paid, then the Minister of Inland Revenue may order a sale of the said timber, lumber or saw-logs, or product thereof, to be made after such notice as he may deem sufficient ; and the balance of the proceeds of such sale, after retaining the amount of tolls, dues, penalties and costs incurred, shall be paid to the owner or claimant of such timber, lumber or saw-logs, or product thereof ; and should there not be sufficient realized from such sale to defray such tolls, dues, penalties and expenses, the amount remaining unpaid may be recovered with costs, in any Court having civil jurisdiction to the amount, by the collector of tolls and dues in his own name, or in the name of Her Majesty ; provided always that the whole amount of tolls and penalties may be recovered in like manner with costs from the owner or party in possession of such timber, lumber or saw-logs, or product thereof, by the collector of tolls and dues, should he, by permission of the Minister of Inland Revenue, choose that method of collection : Provided also, that all pecuniary penalties imposed by any regulation made by the Governor in Council under this Act may be recovered by the collector of tolls and dues, if he soes fit, by summary proceedings before any justice of the peace under the sixty-first section of the "Act respecting the Public Works of Canada," which applies to the works herein referred to.

6. Any officer or person seizing timber, lumber or saw-logs, or any product thereof, in the discharge of his duty under this Act may, in the name of the Crown, call in any assistance necessary for securing and protecting the property so seized ; and if any person under any pretence, either by assault, force or violence, or by threat of assault, force or violence, in any way resists or obstructs any officer or person acting in his aid in the discharge of his duty under this Act, such person being convicted shall be adjudged guilty of felony, and shall be punishable accordingly.

7. It shall be the duty of collectors of Customs, officers of canals, and all other Government officers, when requested so to do, to cooperate with the collector of tolls and dues and his assistants, with the view of preventing the transport of timber, lumber and saw-logs and the products thereof, till the charges thereon are secured.

8. All managers and officers of railways, on being requested by the collector of tolls and dues, shall render a correct account of all timber, lumber and saw logs being forwarded by their respective railways, stating kinds and quantities, and specifying the owners thereof or by whom sent ; and should any of such managers or officers refuse or neglect to give the required information, the collector of tolls and dues or person acting for him may, if he have reasonable cause to believe that the tolls and dues thereon have not been paid, seize and detain such timber, lumber or saw-logs together with the cars employed in removing them, and such cars and timber, lumber or saw-logs shall be forfeited to Her Majesty, unless it shall be proved that the tolls and dues on such timber, lumber or saw-logs have been paid, or that the timber, lumber or saw-logs are not liable for any such tolls or dues ; and the Minister of Inland Revenue may order the same when so forfeited to be sold at his discretion ; and the managers and officers of railways so refusing or neglecting to give the information above required, or giving false information, shall be personally liable for such fines and penalties as may be imposed by regulations.

9. If any person, whether pretending to be the owner or not, either secretly or openly, and whether with or without force or violence, takes or carries away, or causes to be taken or carried away without the permission of the officer or person who seized the same, or of some competent authority, any timber, lumber or saw-logs, or product thereof, seized and detained under this Act before the same have been declared by competent authority to have been seized without due cause, such person shall be deemed to have stolen such timber, lumber or saw-logs, or product thereof, and to be guilty of felony, and shall be punishable accordingly.

10. And when any timber, lumber or saw-logs, or products thereof, are seized for non-payment of tolls or dues, or any prosecution is brought for tolls or dues and penalties under this Act, and any question arises whether the tolls or dues have been paid on such timber, lumber or saw-logs, or product thereof, or whether the same are liable to tolls or dues for having used the works in respect of which the same are charged, the burden of proving payment or that the works were not used, shall lie on the owner or claimant of such timber, lumber or saw-logs, or product thereof, and not on the officer seizing the same, or the party bringing such prosecution.

11. It shall be lawful for the collector of tolls and dues, with the sanction of the Minister of Inland Revenue, to release from seizure any timber, lumber or saw-logs, or product thereof, seized under this Act, and to deliver the same to the alleged owner, on receiving security by bond with two good and sufficient sureties, satisfactory to him, to pay double the amount claimed as chargeable in respect of such timber, lumber or saw-logs, or product thereof ; and such bond shall be taken in the name of Her Majesty ; and if such seizure is maintained by competent authority, the amount actually due, with interest and costs, shall be paid forthwith to the proper officer, otherwise the penalty of such bond shall be enforced and recovered.

TREE-PLANTING.

A correspondent writes to the Minnedosa, Manitoba, *Tribune* as follows :—

SIR,—In your paper of the 13th I read an interesting article on tree planting, from the pen of Hon. Robert W. Furnas, of Brownville, Nebraska. In commenting on that article you say that there is every reason to believe that tree-planting would prove as successful here as in Nebraska. Allow me to say that I have held that belief ever since I came to the little Saskatchewan, and acting on that belief I set to work to prepare a piece of ground for the planting of trees on my homestead. Whether I have been successful or not I will let you and your readers judge. After preparing the ground the difficult part of the undertaking commenced, the all-important question suggested itself "what shall I plant?" Unable to satisfactorily settle the question for myself I wrote to a friend in Minnesota and asked for advice. My friend promptly came to my aid by sending me a Forest Tree Planter's Manual prepared by L. B. Hodges, secretary of the Minnesota State Forestry Association. After a careful study of this valuable book I thought the white willow would be the tree for me. My reason for this was two-fold : first it cost less than any other ; second the willow will grow from cuttings or slips. I sent an order to Minnesota for one thousand cuttings. The cuttings were shipped on the first of March, but those being the good old days of the ox and cart they did not come to Minnedosa till 15th of May. The following day I opened the box. I am not sure that I did not say some "cuss" words when I saw those plants. Little sticks about a foot long the size of a lead pencil and sharp at the big end was what what they sent me, and rather dry looking at that. I threw them in a pond to soak for a couple of days before planting, and then commenced sticking them in the ground and I am free to admit that never did I do work on the place that I was more ashamed of. I planted every one of them. There were 840 willows and 160 cottonwoods. In about a week the buds began to open and in less than one month they were out nicely and out of the whole lot only two failed. Never was man more pleasantly surprised than I was to see trees growing from those small dry sticks. During the summer months I cultivated those trees as I would a crop of potatoes. I kept that piece of ground as clean as a hungry hound's tooth, and in the fall I had a little forest of my own with trees measuring five feet ten inches in height and about one inch in diameter. Now sir, who among us will not want to know what kind of a tree a white willow is. I say it is of great use in a country like this, where there is no timber at all on many of our farms. Of course I am not prepared to say from my own experience how large a tree it is, but I will give others as my authority for saying it is a valnable tree.

Samuel Edwards, Bureau County, Ill., writing to the Germantown *Telegraph*, says :—"It has been growing here since 1845, and the more we become acquainted with it the better we like it. No other tree has made as rapid growth. Many are planting it all over the prairie for timber, much is being set for hedges."

J. Plank, Eyota, Minn., writing to the *Farmers' Union* says :—"I think white willow makes the best and cheapest fence. In six years from planting, you have a live fence which will last a lifetime."

General J. S. Brisbin, U. S. A., writing from Omaha to the Chicago *Tribune* says of the white willow :—"It grows from a shoot without roots, and foresters always praise its rapid and graceful return for the slight labor they bestow upon it. A tree of this kind attains a height of 60 to 70 feet and shows an immense trunk."

But why take up space with further testimony. You may say it is all foreign. In that case allow me to refer you to one of your respected townsmen, Mr. James Jermyn. He has seen my forest trees and talks of them with as much pride as if they were worth thousands to him. Now sir, I think if our Local Legislature would seriously take hold of the forest culture question and do something to encourage our farmers to plant trees, that it would be a wise and good act.

THE FUTURE OF THE COTTONWOOD.

The despised cottonwood may yet become the most popular as well as the most valuable tree. Late inventions and discoveries have revealed the fact that the finest polish and strongest household furniture can be made out of paper. It can be pressed so hard that no instrument short of a diamond can scratch it—and it can be given the finest shades in imitation of wood. and produced cheaper than walnut, mahogany, or ebony. And late discoveries in paper making established the fact that cottonwood makes the whitest and strongest fibre pulp yet manufactured out of wood. There are vast quantities of pulp imported, and some newspaper men are clamoring for it being free of duty. Paper-mills in Delaware, Pennsylvania, and other northern states are shipping thousands of cords of poplar wood from the Chowan river in North Carolina, one mill in Delaware contracting for 30,000 cords. This is costly, and shows conclusively that our rich lands, where cottonwood grows luxuriantly, and of which in many cases the black walnut has been deuuded to make furniture in Englaud, may yet become profitable fields to raise and manufacture paper, furniture, car-wheels and houses. Something has to take the place of pine, walnut and cherry in

house-building and ornamental wood-work, and the probability now is that the cottonwood is the coming tree. It is easier propagated, a more rapid grower, is exempt from enemies and parasites, and is a native almost everywhere. Forestry-men have troubled themselves about the future timber to supply the industrial pursuits. The best of car-wheels are made of paper, which stand the weather and wear longer than iron, and are less liable to accidents from breaking. If they will stand in this most difficult trial, paper can certainly be used in almost any place. And if it can best be made of cottonwood pulp, who doubts that this abused and derided tree is bound to come to the front and yet become one of the most popular timbers for tree cultivation.—*Iowa State Register.*

NEW YORK PURCHASES.

New York is after Lake Superior pine. According to the *Lumber Trade Review*, Lewis A. Hall and A. A. Buel, of the Export Lumber Company, that city, have recently completed the purchase of property situated upon Lake Superior. It comprises 50,000 acres of pine land on Waiska bay, a short distance above Sault Ste. Marie, with booming facilities for 20,000,000 feet of logs, and standing pine timber estimated at 250,000,000 feet, of which about 12,000,000 feet will be got in this season and sawed before the close of 1883. There is upon the property a mill running two circulars, with lath and edging works, shingle mill and all the necessary adjunct machinery of modern construction, together with a store, boarding house, tug and lighters and, in short, every necessary facility for carrying on a large business. The timber is of good quality, and the river which empties into the bay is navigable for a distance of 30 miles from its mouth. We learn that a large portion of the cut has been sold to an Albany dealer.—*Lumberman's Gazette.*

Driving Retarded.

The *Lumberman's Gazette* says:—Reports from every direction are to the effect that log driving is being retarded quite seriously. The Alpena *Argus* in alluding to this says that "the want of water in the various streams has hindered log driving very much, and the logs in many of the streams have been 'hung up.' The prospect for a successful drive, so far, is not very bright, and will cause the lumbermen considerable extra expense." The reports as above from Thunder Bay territory are similar to those from the headwaters of the streams tributary to all the great manufacturing centres, which indicates unmistakably that the lumber production of Michigan will be short of that of last year. The Ludington *Record* says that "the mills started up a month later this year than last. On July 1st, 1883, but two-thirds the amount of last year's cut to same date, will be manufactured. The total cut for 1882 at Ludington was 139,248,851. The estimate for the present year is 115,000,000."

Re-wooding Denuded Forest Lands.

QUEBEC, May 15.—A striking example of the practical advantages of re-wooding denuded forest lands is noted in connection with the celebration of Arbor Day in this section of the Province to-morrow. Hon. Mr. Joly, who prosecutes an extensive lumbering business on the Seigniories in Lotbiniere County, is actually reaping the fruits of re-foresting; timber which he has been cutting for years past having been planted by his own father on the land from which the primæval growth had long been cleared by the early French settlers.

THERE is at present, comparatively speaking, very little lumber on the Saginaw river mill docks unsold. When we consider the enormous amount left over last fall, it does not look as though the season thus far has been a very dull one. As all the best lumber has been sold fully up to last fall's prices, and the balance has been disposed of at trifling concessions, the market may be considered as fully up to expectations, and a prominent lumberman on the river states that with the exception of hard lumber and bill stuff the market is in better condition than it was last year at this time. This is interesting. —*Lumberman's Gazette.*

Chips.

AT Auburndale, Wis., on May 14, six million feet of lumber belonging to O'Connor & Co,, also a quantity of lumber belonging to the Conley Manufacturing Company were burned. It is believed to be the work of an incendiary.

THE planting of 100,000 eucalyptus trees on the Roman Campagna has counteracted the effects of the deadly malaria to such an extent that Tre Fontaine, the abbey of the Trappist monks, is rendered habitable through the entire year.

THE members of the Northwestern Lumber Manufacturers' Association, as a body, will take no steps toward reducing the cut of their mills in accordance with the original design of the association. Some concerns in Minneapolis, however, will reduce their cut twenty-five per cent.

THE *Lumberman's Gazette* says that eleven hours a day is now the schedule time in the Grand Haven mills. Last season the men put in twelve hours a day. Gradually the saw mills of the country are reducing their working hours, and in a few years ten hours will undoubtedly constitute a day's work in most of the mills in the country.

THE *Lumberman's Gazette* says:—Grand Haven mill men are setting a grand example by agreeing to close down on the afternoon of decoration day. This should be followed by similar action in other cities, until decoration day becomes a recognized national holiday, on which to commemorate the glorious deeds of the noble men who went forth in their country's defence, in her great hour of peril.

IN South Australia a bonus of $10 per acre is given to owners who successfully establish not less than five acres in trees, which if in strips must be at least 100 feet wide. The Governor is empowered to proclaim parts of the country to be "forest districts." A Conservator of Forests has been appointed and in five years nearly 3,000 acres of public land have been planted, nurseries, etc., started, and fire-breaks made and kept clear.

IN consequence of the demand for mahogany of late it has been feared that the supplies will fall short. The vice consul at Puerto Plato, San Domingo, states, however, that the diminution in the exports of mahogany is by no means to be attributed to the scarcity of the wood, for the forests are apparently inexhaustible; but is to be accounted for by the absence of suitable tonnage for charter in the neighboring colony of St Thomas throughout the year.

THE *Lumberman's Gazette* says that the demand for lumber must continue just so long as the local papers throughout the country are filled with items similar to the following clipped from an exchange:—"Carpenters, joiners, masons, painters and paper-hangers were never so busy as the present spring. Several new residences are being erected, many additions being built, and repairing and overhauling is the order of the day. It is almost impossible to employ a mechanic."

A SYNDICATE consisting of P. C. Heald, Byron Burch and Dr. W. E. Burtless, of Midland, Michigan, have concluded a purchase from John Larkin of some 2,000 acres of wild land, situated in Larkin township. Quite a portion of this land is covered with green timber—oak, ash, elm, etc., while another portion of it will yield an amount of timber estimated at 1,000,000 feet. It is the design of the purchasers to put a portable saw mill in and to commence soon the manufacture of some of this timber.

THE *Timber Trades Journal* says:—With regard to the cargo trade we hear of no movement in the market yet, and although a few shiploads have been placed here and there in an incidental sort of way, the general disposition of the wholesale houses seems to be to still hold off. On the other hand coast buyers have not been quite so quiet as some anticipated, and the shippers have placed a much greater quantity of goods amongst the outport firms than they are generally credited with. This is discernable in the present extensive demand for tonnage, which, we are given to understand, is fully up to the average.

THE *Manufacturer's Gazette*, published at Boston, has this to say of the lumber market in that city: An increased activity is manifested in the lumber market and a good business is doing in all departments. In southern pine business is very good. Mills at the south still decline orders. The tendency of the market is upward. In the local trade the demand has improved and stocks are reducing. The combination of manufacturers still uphold prices, and, owing to the backward spring, the situation is rather in their favor. A good business is reported by members of the combination. The outlook for the lumber trade in general is very encouraging.

THE New York *Lumber Trade Review* says: The West Indies are taking very liberally of white pine, the shipments thus far this month comparing very favorably with those of March. There is, however, some little scarcity of good shipping boards, and additional supplies in quantity can hardly be expected before navigation opens. The yards continue to seek necessary stock in Albany, but the majority are purchasing lightly in anticipation of doing better after the opening of the canals. The quantity of stock carried over from last fall rather exceeds that of same time last year, but holders do not appear willing to grant any material concessions with a view of reducing it.

THE Toronto *World* says:—The saw-mill men of Muskegon have determined to run their mills only ten hours a day, and thereby reduce the cut in order to counteract the influence of the action of dealers in Chicago, who resolved not to buy lumber unless at a reduction from present rates. It would be a good thing were the same plan generally adopted, not only in the lumber trade, but in many other manufactures. What sense is there in working mill and factory hands twelve or fourteen hours a day only to bring about the result of a glutted market and non-paying prices? The masters would benefit themselves, as well as the men, by making ten hours the rule in nearly all trades.

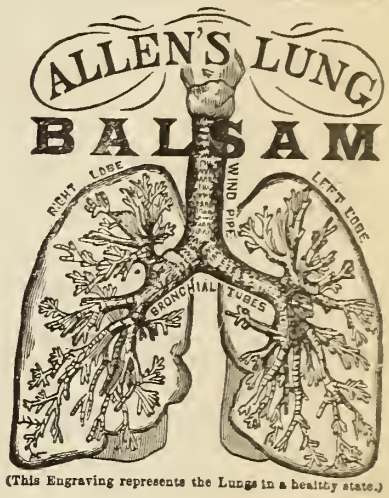
THE *Lumberman's Gazette* says:—Since the death of Sir Robert Christison the investigations on the growth of wood in deciduous and evergreen trees, begun by him, have been continued by Dr. Christison, who has published these results: Evergreen trees began their growth much earlier in the year than the deciduous, and stopped their rapid increase much sooner. It was therefore evident why the variations in growth in successive years did not follow the same law in these two classes of vegetation. An early winter had its influence directly shown in deciduous trees, and a late one in evergreen trees. When the winter was wet the growth of the deciduous was very apparently more affected than that of the evergreen trees.

MR. S. S. AVERY, of 320 North Third street, St. Louis, carries an ivory-headed live oak cane, which is made from the first wood ever cut by a white man's axe in America. The Spaniards, when they settled St. Augustine, Fla.. in 1565, bent themselves first to building a block-house. This was constructed of live oak logs, and it stood until 1844, when it was torn down. The wood of which the cane is made was taken from one of the logs of the block-house by its present owner, who had it turned and mounted with an elephant's tusk. It has been in his possession in constant use ever since, except on such occasions as he loaned it for exhibition in Iowa, Kentucky, and other States.—*Southern Lumberman.*

THE Ottawa *Free Press* says that one of its reporters interviewed several boat owners regarding the manner in which they would be affected by the strike of the American boatmen. The prevailing impression is that lumbermen will endeavor to procure Canadian barges to convey their shipments to Whitehall, where American boats will be employed, if possible, at cheap rates, to convey them on to New York. The lumber yards, with the exception of Sherman & Lord's are comparatively vacant as yet, but when the cut reaches large proportions, something will certainly have to be done to ship the lumber away. Mill owners just now seem determined to resist the demand of $4 asked by the Americans, while the latter are equally determined to hold out, having it is said, some $5,000 to back them.

THE COTTONWOOD.

There has been a question raised as to whether the cottonwood came under the meaning of the government as a timber tree. The commissioner of the general land office has rendered a decision affirmatively. He says: "Under the current rulings of this office, and the department, the cottonwood is regarded as a timber tree, and cultivation of the same by timber culture claimants is accepted as a compliance with the law, so far as the quality of the timber is concerned. While it is shown by the testimony that this tree is not used to any great extent in the locality for manufacturing purposes, building, fencing or firewood, yet it appears that it is used for outbuildings, houses, fences and firewood occasionally, according to the notion or necessity of the settler, or the distance from timber of a superior kind. The cottonwood tree, as it grows in the locality, is, therefore, not either useless for the purposes mentioned, or merely ornamental. This is apparent from the evidence in the case. The entry is held for cancellation, for the reason that the land was not subject to timber culture entry, the same not being prairie land or other land devoid of timber."—*Northwestern Lumberman.*



(This Engraving represents the Lungs in a healthy state.)

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Market Reports.

MONTREAL.

From Our Own Correspondent.

MAY 26.—Since the date of our last report very little activity has been observable in the state of this trade, but although we cannot as yet change prices the market may be called easier. Laths are coming in to some extent, but as plastering has been retarded owing to the state of the weather, retail lots are still sold at $3.00, but wholesale lots can be had at our quotations. There has been a good inquiry for ash at our quotations. There was a large attendance of buyers at the auction sale of lumber on account of Messrs. Henderson Bros., who have been obliged to remove their yard, as the ground is required for the new lumber basins to be erected by the Dominion Government. A large quantity of lumber changed hands and the prices obtained are considered fair, footing up to over $40,000. The balance of the lumber will be disposed of next week. Lumber is not arriving so freely as was looked for, but considable importations are daily expected. We quote prices ex yard as follows :—

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 75@ 2 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

FREIGHTS AND SHIPMENTS.

Rates by steamship and sailing vessel to England are 65s. for deals and 67s. 6d. for boards. To the River Platte there has been engagements at $13. A considerable quantity of lumber has been shipped by steamers to Liverpool since the opening of navigation, as will be seen by the following memoranda taken from the custom house returns. S S. Lake Champion, 75 standard deals; S S. Ontario 7,711 pcs deals and 3,144 boards ; S S. Texas, 1,126 boards and 4,293 pcs deals; S. S. Circassian, 9,061 pcs deals ; S S. Dominion 7,711 pcs deals and 3,144 boards. To Glasgow S S. Cynthia 10,409 pcs deals and 109 sacks spools; to Bristol S S. Dorset, 1,323 pcs deals.

CORDWOOD.

Receipts of wood by barges show a falling off as compared with the same period of last year, this to some extent is made up by what is brought in by the G. T. R., and there is plenty to supply the consumptive demand, but no change can be noted as yet in price, and we continue to quote at wharf ex cartage :—

Long Maple	$ 6 50
Short "	6 00
Long Birch	5 50
Short "	5 00
Long Beech	5 00
Short "	4 75
Long Tamarack	4 50
Short "	4 00

TORONTO.

From Our Own Correspondent.

MAY 23.—Considerable lumber has left the docks since my last letter, most of which has been carried by Capt. Hall's vessels, four in number, capable of conveying in one trip nearly one and a half million feet of lumber. So that although our docks may be well blocked with lumber on the arrival of this fleet, they appear quite forlorn on their departure. This cannot last long, however, the balance of last year's cut will soon be all away, and on account of the late starting up of the mills this spring, there must of necessity be a dearth of lumber for a longer period than usual, until the new cut is fit for shipment. Vessel owners and captains are conscious of this and feel quite gloomy over the prospects.

Sales by car load during the last two weeks have been quite limited, retail dealers being anxious to lower their stocks on hand, before making fresh purchases, and in this respect most of them have well succeeded, as from personal observation I can affirm that I have seldom noticed stocks as low as in most of the retail yards at the present time, more especially is this the case in bill stuff, lath and shingles, but as the mills are now fairly at work, this state of things may soon be altered, and in this connexion I would remark that many of the manufacturers have yet to learn wisdom as regards the manufacture of bill lumber ; many of them seem to have the idea that anything is good enough for bill stuff, and turn it out with waney edges and slab ends, so that on its arrival here perhaps one third is culled, and they seem to think that they are being hardly treated, when, in fact, the fault is all their own, and the sooner they become convinced that lumber so manufactured will not pass muster, the better for themselves.

The yards are all doing a good trade, considerable improvement having taken place in this respect since I last wrote you. Prices are also fully maintained.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

OSWEGO, N. Y.

From Our Own Correspondent.

No change in quotations, The receipts since our last have been quite large; dealers are making sales steadily, but the demand is quiet, and the prospect is largely against opening prices being maintained.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of May 26, says : There is a good, steady volume of business doing, and values keep along on quite an even basis. Western pine is in good demand and prices are quite firmly sustained. Eastern lumber is in steady inquiry, and values fully hold their own. Southern pine is quiet but fairly steady. Hardwoods are in moderate demand, and desirable selections are well sustained in price.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of May 26, says :—The arrivals of cargoes at the docks for the week ending Wednesday did not show an increase over the previous week, notwithstanding the heavy gale of Sunday, Monday and Tuesday. On Monday the arrivals numbered 50, only a portion of which, as is usual stopped at the market. The offerings have been taken quite freely, only a few cargoes having dragged on the market. Prices of lumber have not varied quotably from the previous week, though two or three sales of piece stuff have boen reported as low as $9.

The contest between purchasers and sellers of lumber on the market is a little more earnest than it was a week since. The season is advancing, and the jobbers have not witnessed such a softening down of holders' views, as they have been hoping and waiting for. Several of them have been over the lake to buy, and most have returned without making purchases. They bring back tidings of discouragement from the mills. The hearts of the manufacturers are still like Pharoah's. If anything they are growing more adamantine. Commission men talk more confident than they did, and the manufacturers move around among the boys at the market and indulge in a good deal of stout expression about their ability to hold up prices. It must be confessed that the jobbers are not jubilant. They do not claim that the market is weakening, but, on the contrary, express surprise that it exhibits so much backbone. They assert that they cannot possibly afford to pay the prices at which cargo lumber is selling, and at the same time hope to escape without loss. Some of the manufacturers are frank enough to say the same thing, but so long as they can sell lumber for going prices, they cannot see why they should let it go for less ; what lumber will bring is what it is worth. The condition is an anomalous one, and why it should exist is not as clear as it might be, though each side of the difference has a theory about it.

The offerings have been taken so quickly during the past week that it has led commission men and holders to think that the market has touched bottom, and that it will be easy hereafter to certaiuly maintain current values, aud possibly realize a slight advance later on. They are at least encouraged to expect a hardening of prices, and consequently less trouble to sell at steady figures.

Quotation are as follows:

Short dimension, green	$ 9 50@10 00
Long dimension, green	10 50@12 00
Boards and strips—No. 2	12 25@13 00
Boards and strips—No. 1, fair	14 00@16 00
Boards and strips—No. 1, choice	16 00@20 00
Shingles, standard	2 45@ 2 50
Extra A	2 50@ 2 60
Lath	2 10@ 2 20

Receipts of lumber, shingles, etc., for the week ending May 24, as reported by the Lumberman's Exchange :—

	RECEIPTS. Lumber.	Shingles.
1883	44,034,000	40,841,000
1882	55,554,000	38,560,000

FROM JANUARY 1, 1883, TO MAY 21, 1883, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1883	185,084,000	176,422,000
1882	440,523,000	175,676,000
Inc		746,000
Dec	255,439,000	

STOCK ON HAND MAY. 1.

	1883.	1882.	1881.
Lumber	300,731,016	294,244,311	228,256,644
Shingles	90,070,344	104,027,305	73,698,575
Lath	22,283,445	10,611,585	21,038,756
Pickets	842,291	1,827,993	2,693,844
Cedar posts	113,377	159,937	550,027

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LIVERPOOL.

The *Timber Trades Journal* of May 12, says : Whilst there has been a fair amount of business done in a retail way during the week, there has been an absence of liveliness in all articles, if we except the mahogany and fancy woods branch of the trade, on which there will be found some remarks below.

The spruce deal market has been dull, but the remainders of the various cargoes which have from time to time been withdrawn from the auctions have been placed by private treaty at prices equivalent to those obtained by auction.

Next week will be as usual in Whitsuntide, in this part of the country, chiefly devoted to holiday-making, and, in point of fact, there will be little, if any, business done, hence the desire of those who had cargoes to offer for sale by public auction to force them into last and this week.

On Thursday last, the 3rd inst., Messrs. Farnworth & Jardine offered one cargo of St. John, N. B., spruce deals, of last season's import, stored and piled in their yards, of which about one-half was sold by auction and the remainder withdrawn ; but most, if not all, was subsequently sold by private treaty. The following were the prices realized :—

Spruce deals, St. John, N. B.—

		£	s.	d.
21 ft. and up	3×11	8	0	0
16 to 20 ftt.	3×11	7	15	0
12 " 15 "	3×11	7	15	0
9 " 11 "	3×11	7	7	6
21 ft. and up	3×9	7	7	6
16 to 20 ft.	3×9	7	7	6
12 " 15 ft.	3×9	7	7	6
9 " 11 ft.	3×9	7	2	6
16 " 25 "	3×7	6	17	6
12 " 15 "	3×7	6	17	6
9 " 11 "	3×7	6	15	0

To-day, the 9th inst., Messrs. A. F. & D. Mackay offered a cargo of St. John, N. B., spruce deals, birch, &c., timber just arrived, and sundry parcels of Miramichi, Quebec, and other descriptions of pine and spruce deals. The newly-arrived cargo sold fairly well, but the birch brought out the most competition, although it was bought principally by local dealers. The prices realized were for

St. John, N. B., spruce deals—

		£	s.	d.	£	s.	d.
16 to 25 ft.	3×11	7	7	6			
12 " 15 "	3×11	7	5	0			
9 " 11 "	3×11	7	2	6			
16 " 25 "	3×9	7	2	6	7	5	0
12 " 15 "	3×9	7	2	6			
9 " 11 "	3×9	7	0	0			
16 " 25 "	3×7	6	17	6	7	0	0
12 " 15 "	3×7	6	17	6			
9 " 11 "	3×7	6	12	6			
9 " 24 "	2½×7	7	0	0			
9 " 22 "	3×12 to 17, chiefly 3×13	7	2	6			
9 to 25 ft.	3×8	6	17	6			
9 " 25 "	3×6	6	15	0			
Scantling		6	15	0			
Deal ends		6	5	0			
Deals 10 to 22 ft.	4×7 to 14	6	17	6			

Birch timber, St. John, N. B.—

20½ to 23 in. deep	26½d.	per ft.
20 "	23½d.	"
19½ "	21d.	"
19 "	19¾d.	"
18½ "	19¾d. to 19½d.	"
18 "	19d	"
17½ "	18d. to 18¾d.	"
17 "	18d.	"
16½ "	17½d. to 17¾d.	"
16 "	17½d. to 17¾d.	"
15½ "	16½d. to 17d.	"
15 "	16d.	"
14½ "	15¾d.	"
14 "	15½d.	"
Ash 13 to 17 1-2 "	3s. 1d.	"

The other woods, pine deals, &c., were withdrawn.

GLASGOW.

The *Timber Trades Journal* of May 12 says : Imports for the past week have again been almost entirely confined to what has come per steam traders from New York, say 150 logs Cuba mahogany, also walnut, oak planks and scantlings, &c.

On Tuesday, the 8th inst., a public sale was

held in Yorhill Yards here, when a cargo of Minatitlan mahogany was sold, prices as undernoted; also 75 logs American walnut ex sundry steamers, a portion of this wood being culls.

For hardwoods there is at present a decidedly healthy demand, especially for mahogany, of which there has been but a sparing supply to this market. Shipbuilding orders continue to come to Clyde. We note that at Greenock two more steamships of 5,000 tons each are to be built for the P. & O. Steamship Company.

A request for an advance of wages was lately made by the operative house builders, but the masters have unanimously agreed that no advance is to be given meantime, as the labour market is well supplied, and it was also resolved to adhere to the system of fortnightly "pays," as at present.

AUCTION SALES.

Several parcels American black walnut were sold by Messrs. Edmiston & Mitchells, viz:—
33 logs (av. sq. 16½ in.) at an avg. of 5s. 4½d. per c. ft.
18 logs (do) at an avg. of 5s. 0½d. per c. ft.
24 " (do, 14 in., inferior) at an avg. of 3s. 9½d. per c. ft.

Following the above Messrs. Allison, Cousland & Hamilton sold—
3 logs whitewood, 2s. 5d. to 2s. 8d. per c. ft.

LONDON.

The *Timber Trades Journal* of May 12, says: The importation appears to have experienced a considerable falling off during the month of April as compared with last year, and it would seem as if some recovery in prices of wood was not far off, were it not for the continuation of the dulness, still so marked, in the commercial world.

There is apparently nothing of moment stirring in the timber trade, which but reflects the state of affairs in other branches of commerce throughout the country generally, and it is high time an alteration took place. We are all waiting, Micawber-like, for something to turn up, for with the least revival of activity a general improvement of prices all around is confidently anticipated; but when will this revival come?

OTTAWA NOTES.

The *Monetary Times* says:—The lumber trade of the Ottawa is opening rather quietly, this season being a backward one and the mills being some two weeks later in starting. However several pretty large sales have been made to outside parties, at prices on the whole a shade lower than a year ago. This is an unfortunate, and indeed an unexpected feature of the trade, especially in view of the alleged fact that each successive year the quality of the lumber got out is not quite equal to that of previous years, and of the future fact that the expense of procuring the logs and getting them down the streams is increasing. The larger concerns such as J. R. Booth & Co., Bronson Weston & Co., Eddy & Co., etc., expended last year, we are told, from $60,000 to $80,000 more in getting out the same quality of lumber, than they did in the years 1879 or 1800. It is quite true that there has been a considerable advance in prices when compared with these years, but this advance is not at all in proportion to the increase in the cost of production. Manufacturers of lumber are consequently obliged to be satisfied with less profit.

OUR FOREST PRODUCTS.

It appears by the census returns that the development or destruction, as one may happen to regard it, of the forest wealth of Canada has gone on apace during the last decade. In the four old provinces the comparative figures of production are as follows:—

	1871.	*1881.*
Square white pine, cubic feet	24,236,821	17,358,245
Square red pine, cubic feet	1,954,372	2,571,328
Square oak, cubic feet	3,302,643	5,734,042
Tamarac, cubic feet	5,695,963	4,585,563
Birch and maple, cubic feet	1,959,357	4,294,926
Elm, cubic feet	1,832,654	3,092,224
Walnut, cubic feet	220,570	808,250
Hickory, cubic feet	197,827	336,429
All other timber, cubic feet	29,290,264	47,045,450

The only classes of wood of which the production has decreased are white pine and tamarac, and in each case the falling off occurs in the Province of Quebec, where the output of pine has decreased from 8,876,060 feet in 1871 to 4,840,462 feet in 1881, and of tamarac from 3,994,878 feet in 1871 to 2,707,745 feet in 1881. The chief lumber producing province is Ontario in which the output of all woods except white pine has considerably enlarged during the decade. How large a proportion of the whole production in the four old provinces is made in Ontario may be learned from the fact that in 1881 the cut of white pine there was 12,262,570 feet, of square oak 5,448,263 feet, of elm 2,925,382 feet, of walnut 741,431 feet, and of other timber 26,200,058 feet. Quebec holds the leading position in respect to the production of tamarac and birch and maple only. Taking the new provinces we find British Columbia far in the van with an output of 23,348,500 feet of white pine, while of unenumerated woods Prince Edward Island is credited with 797,851 feet, Manitoba 622,059 feet, British Columbia 436,792 feet, and the Territories 54,806 feet. In the four old provinces the output of logs, &c., was as follows:—

	1871.	*1881.*
Pine logs	12,416,408	21,501,128
Other logs	9,314,557	23,055,706
Masts, spars, &c.	121,685	191,078
Tanbark, cords	162,521	398,239
Firewood, cords	8,713,083	10,493,155

The comparatively small increase in the production of firewood is somewhat remarkable, showing very plainly that the consumption of wood has about reached its limit, and that coal is becoming generally a substitute by reason of its economy in cities and towns.—*Montreal Gazette.*

Sale of Timber.

The Kingston *Whig* says:—W. C. Caldwell, who is to became a citizen of Kingston, has sold all his timber to Messrs. Calvin & Son, to be delivered as soon as possible. It is now on Clyde river. Mr. Caldwell is at present taking out a large amount of cedar, which has been contracted for by Chilion Jones, of Brockville, to be used in the breakwater in connection with the new island works at Toronto.

Mr. Caldwell's steam saw mills at Carleton Place may possibly open for a few weeks, beginning next month. It will not take long to put the Clyde cut through the saws. Some thousands of logs are on the brink of the High Falls detained only by a single boom. The *Carleton Canadian* says if loosened they would every one sweep over and come down in fine swift style, so great is the rush of water. They are held there as if by a small cord which a penkife could free, but Mr. Caldwell is bound that the Supreme Court enactment shall be observed, and will not move a jot to bring them on.

RATHBUN & SONS, of Deseronto, have secured the contract to supply 250,000 ties to the Canada Southern. The steam barge Tecumseh has has landed at Courtright dock with 17,000 ties, being the first consignment, which were nearly all loaded, and partly distributed along the line Tuesday. The schooner Peerless also arrived with a cargo of the same description, but during the terrible storm coming down Lake Huron she lost most of her deck-load, which is estimated at 200 ties. A large *posse* of men are engaged unloading the boats and loading cars for distribution. The contract price for ties, which are cedar and come from St. Joseph's, Cove Island, Georgian Bay, was four cents apiece, and loaded at Courtright, representing a total outlay of $10,000.

MANY years ago Sir Henry Stewart made a plantation of large trees in the moist climate of Scotland, but they made little growth and had a sickly appearance. It was then that Loudon, with his long and extensive experience as a landscape gardener, offered to make a public test with any one who would try large trees, he himself planting small and thrifty ones with full roots, in rich, deeply-trenched and well-cultivated ground, with the confident assurance that in a given number of years he would show trees not only larger but immeasureably finer in appearance. The above is but a corroboration of the experiments made by all tree planters. With the smaller trees more roots can be transplanted, they require no staking and will grow more rapidly than larger ones.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

RAFTS ARRIVED AT QUEBEC.

The Quebec *Chronicle* gives the following list of rafts, &c., that have arrived:—

May 17—H. E. Hall, deals, Hall's booms.
Ritchie Bros., deals, New Liverpool.
Ross & Co., (Gordon & Lot,) white pine, &c., Dalhousie cove.
P. H. Grandbois, deals, St. Casimir,
Geo. Baptist, Son & Co., deals, Three Rivers.
May 21—D. D. Calvin & Co., (2), oak, etc., sundry coves.

Rafting Timber.

R. & G. Strickland are now rafting at Port Hope a quantity of timber, 150,000 cubic feet, brought from the Township of Oakley, via Black River and Longford. It is five weeks today (May 26) since they commenced driving. It is a splendid lot of timber, averaging 65 feet.

A TOOTH-PICK factory at Sebec, Me., consumes annually 1,000 cords of poplar and birch, turning out a two-cord load of splinters per day. The factory is owned by Charles Foster, the same gentleman having a similar establishment at Buckfield.

THE *Northwestern Lumberman* says:—J. H. Chapman, Oxford, Me., turns out 1,000 dozen shovel handles per month, consuming annually from 250,000 to 300,000 feet of ash. The entire product has for nearly 20 years been taken by a Gananoque, Ont., gentleman. This season 400,000 shingles and a lot of basswood clapboards will be manufactured.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

NEVER ALLOW IT.—Never allow the bowels to remain in a torpid condition, as it leads to serious results, and ill health is sure to follow. Burdock Blood Bitters is the most perfect regulator of the bowels, and the best blood purifier known.

HIGHLY SATISFACTORY.—Impure blood and low vitality are the great sources of most diseases for which Burdock Blood Bitters is the specific. S. Perrin, Druggist, of Lindsay, writes that Burdock Blood Bitters give more general satisfaction than any blood purifier in the market.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w46d112L22

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OR
FALLING SICKNESS

Permanently Cured—No Humbug—by one Month's usage of Dr. Goulard's Celebrated Infallible Fit Powder. To convince sufferers that these powders will do all we claim for them we will send them by mail, **post paid, a free Trial Box.** As Dr. Goulard is the only physician that has ever made this disease a special study, and as to our knowledge thousands have been **permanently** cured by the use of these **Powders. We will guarantee a permanent** cure in every case **or refund you all money expended.** All sufferers should give these powders an early trial, and be convinced of their curative powers.

Price for large box $3.00, or 4 boxes for $10.00, sent by mail to any part of the United States or Canada on receipt of price, or by express, C. O. D. Address

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Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by us for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Proprietors, Toronto

THE DAWN OF A BETTER DAY.

There are few industries, we might say scarcely any, which in their retail transactions are so steady as the timber trade. A builder's price-book, for instance, of ten years ago will give you a valuation of the timber you have occasion for in the construction of a house which will be pretty nearly as good a guide now as if it were published yesterday ; and when we speak of the fluctuation in prices we must be chiefly understood as referring to the import department of the business, and the relative value of the goods at the landing wharves in this country, in comparison of those current at the shipping ports abroad, with the freight and charges added to them ; and this is the question with which the magnates of the trade are chiefly concerned at the present time.

Turning to the timber trade, its proceedings are quite assimilated to the tone of business generally—it rather plods than presses forward along the even tenor of its way, but it may be said of it, as our aforesaid contemporary speaks of the iron trade, that "a better feeling is shortly expected." It is not impossible that this may come soon, for it has been "shortly expected" for a long time back, and we must in the natural course be much nearer now to the good time coming than we were then.

In dull times like these, London and Liverpool look at each other across the midland counties for something to indicate a trade revival that may serve to hang new hopes upon, and the better prospect seems at the present to be found here. Liverpool, rejoicing also in fine weather, moderate stocks of most kinds of wood, and a fair amount of building going on in the suburbs, complains that there are no large works in hand "likely to influence the future of the timber trade" ; and, therefore, that "business on the spot is not very extensive, and prices do not improve." It seems to have established a small advance on pitch pine, but not sufficient to cover the advance of freight, "so that the shipper is really in a worse position now than before." Neither has the importation of Liverpool yet come up to its last year's figures at a similar date, which remark applies to almost all the ports except those which require large quantities of pitwood, such as Cardiff, Swansea, and Newport, Sunderland, and Shields, all of which have exceeded (some of them considerably so) their import of last year up to date, while on the other hand, Liverpool, Hull, Newcastle, Hartlepool, and Grimsby are much behind, which augurs well for the summer trade. Even London does not come up to its last year's figures yet, though it is but a fraction in arrear. Trade, however, has continued comparativoly stagnant here as elsewhere, as we have had painfully to notice, when remarking hebdomadally on our dock deliveries. But all at once, and commencing a fortnight ago, a larger demand has sprung up, apparently in good earnest, for in two weeks the deliveries have exceeded those at the same time in 1881 by more than 2,600 Petersburg standards, a rather remarkable spring forward after a long period of retrogression ; and at this rapid rate room will soon be made at the docks for the new arrivals without any crowding. The total deliveries for the two weeks including square timber amounting to nearly 11,000 standards, a rate of progress which we cannot expect to see maintained for any length of time, but none the less satisfactory as long as it lasts. Nor must it be forgotten that these are only the public deliveries, while those from the many large private timber yards and wharves of the Thames are unchronicled, though they would swell the returns to something considerable ; and it must be evident that the quantity of imported wood gone into consumption during the past fortnight from the various depots in London cannot have been less than 60 to 70 cargoes, averaging 200 standards each. We need not expatiate on the immense amount of profitable labour which would be set at work by the distribution of this vast amount of wood in so short a time among consumers, for it will readily be conceived that there can be no want of employment in the building trade in and around the metropolis while so much business is done in delivering timber for use there.

We are quite aware that it may be argued that there is no evidence that the timber sold and delivered in London, according to the figures produced, is not still lying unused on the premises of the dealer who bought it ; but we do not see that the assumption of returning activity in trade is in any manner impaired by that possibility. The timber yards of the dealers have been remakably well supplied all the winter, and if in a fortnight they have suddenly found room for 12,000 to 15,000 standards more, it shows that they have been doing a trade to that extent with the public as certainly as if the Dock deliveries aforesaid went directly to the consumers instead of to those that are in the habit of supplying them. The gap made among the Surrey Dock piles went to replenish the ground of the private timber yards, but not till the public demand had cleared the needful open spaces to store them. Whichever way we look at it, the fact remains that nothing but an active revival of business can account for the removal of so large a quantity, we may say of so unusual a quantity, of timber from the docks in so short a time, for it is quite apart from the normal condition of things during the foregone portion of the present year, and we may fairly regard it as the precursor of a good healthy reanimation of the trade throughout the land.

What we have of late been suffering from may be traced to our indefatigable national industry. We appear to have been producing too much from abroad, till at last the supply overtook the demand at both ends. Then came a pause, and a cry of dull trade arose. There was still an immense business doing, but it was not enough for everybody, and productive works gradually reduced their establishments, because at their full strength they ceased to be profitable. So in the timber trade people continued to import freely while they saw a great trade in prospect. But by-and-by the demand fell off ; failures among builders and other buyers, and the consequent decay of trade, threw a gloom over the latter part of last year, and almost every timber merchant fancied he had laid in too much stock. The idea grew more confirmed when a sloppy winter supervened, and it is only now, after the spring has returned in all its glory, that the trade is showing symptoms of a decided rally, which is not unlikely before long to pervade every branch of it. London has, at any rate, set the example of shaking off the apathy which has ruled evrywhere latterly. Let us hope that the same spirited revival will, in like manner, soon show itself in the provinces. —*London Timber Trades Journal.*

ARBOR DAY A SUCCESS.

QUEBEC, May 16.—The first celebration of Arbor Day here to-day was a most gratifying success, far surpassing, as admitted by Montreal visitors, the celebration in that city. Everything combined, including the weather, to render it a most enjoyable gathering of the promoters of the movement, their friends, and the citizens generally. The Lieutenant-Governor and his Cabinet, the heads of the public departments, mayor, aldermen, and councillors, the ecclesiastical dignitaries, foreign consuls, the citizens' committee, the convents, seminaries, orphans', and other charitable and educational institutions all joined together to make Arbor Day one to be remembered in local and provincial annals. The day was also pretty much observed as a general holiday, and an immense crowd, including many strangers, assembled to witness the ceremonies, which were duly opened by the Lieutenant Governor planting a tree in the grounds of the new departmental buildings, followed by the Hon. Mr. Joly, the soul and leader of the movement ; Crown Lands Commissioner Lynch, who has ably helped it on from the start ; Archbishop Taschereau, the Anglican Bishop, the Quebec Premier and his Cabinet ; the Rev. Dr. Cook, of St. Andrew's ; Rev. Dr. Clark, of Chalmers' ; the Speakers of both Houses, the commandant of garrison, the Mayor and a large number of notable personages, ecclesiastical, civil, and military, not omitting the press. In this way some sixty fine oaks were planted when, headed by the baud and a detachment of "A" battery, and the fire brigade in uniform, a procession moved off to the espalande, where a hundred beautiful maples, elms, and silver birches were put in. Three of them were specially named after Lord Dufferin and the present Ministers of Militia and Public Works. A double row of trees was next planted on the road leading to the citadel, after which the Corporation plantation took place on Dufferin terrace, The magnificent elms presented by the Hon. Mr. Joly being put down, besides many others in the names of the Queen, the Governor General and Princess Louise, amid enthusiastic cheers of the members and officers of the City Council. A silver pick with ebony handle, was presented to the Mayor, and a silver spade similiarly mounted to Madame Langelier, as *souvenirs* of the occasion. The official ceremony closed with addresses from the Lieutenant Governor, Commissioner Lynch, Mr. Joly, Ald. Rheaume and the Mayor, congratulating the citizens upon the enthusiastic manner in which the day was celebrated. A considerable plantation was also made during the day by the different schools, hospitals, and other public institutions, as well as by many private citizens.

THE ENGLISH WOOD MARKET.

James, Smith & Co.'s Liverpool Wood Circular dated May 2nd says :—The arrivals since our last have been 41 vessels, 20,755 tons, against 50 vessels, 25,197 tons, in the corresponding period last year, and 27 vessels, 14,365 tons, in 1881.

FROM 26TH JANUARY TO 30TH APRIL, 1883.

Quebec	nil	vessels.	nil tons.
St. John, N. B., &c.	4	"	3,843 "
United States	23	"	16,345 "
Baltic	64	"	26,941 "
Total	91	"	47,129 "

FROM 26TH JANUARY TO 30TH APRIL, 1882.

Quebec	nil	vessels.	nil tons.
St. John, N. B., &c.	8	"	6,027 "
United States	33	"	27,714 "
Baltic	55	"	25,610 "
Total	96	"	59,351

FROM 26TH JANUARY TO 30TH APRIL, 1881.

Quebec	1	vessel.	921 tons
St. John, N. B., &c.,	4	"	3,734 "
United States	39	"	26,445 "
Baltic	22	"	9,371 "
Total	66	"	40,471 "

Since our last issue there has been no change in our market. The import has been moderate and the consumption unusually dull and languid ; fortunately the stocks are not heavy, and there can be little chance of any improvement until the general trade of the country shows more activity. The money market remains quiet. Freights are slightly easier, with more tonnage offering, with the exception of pitch pine, rates for which from Pensacola are still high.

COLONIAL WOODS.—Yellow pine timber : The stock is light and sales have been by retail from the yard only. A parcel of fair average square pine is reported sold at from 2s. 1d. to 2s. 2d. per foot. Red pine is without change and the demand is fair. Of ash the sales have been by private only, with the exception of a few logs sold at auction, which realized 2s. ½d. Elm is light in stock, and prices are fully maintained. Birch has been sold by auction at an average of 19d. for 712 logs ex Director, from St. John, N. B., all fresh, new wood. The consumption has been very good, and the stock is small. Oak—The stock is 171,000 against 243,000 feet, aud the consumption has fallen off as compared with the same period last year ; a parcel of mixed quality is reported at 2s. 7d. per foot. The demand for oak scantling continues good, and two cargoes are reported sold at 2s. 6d. to 2s. 7d. per foot, ex quay, and small parcels of prime quality at about 3s. per foot, also a small lot of ordinary quality at 2s. 5d. per foot, ex quay ; the stock is nearly double that of last year. N. B. and N. S. spruce deals : The stock is now reduced to a moderate quantity, although somewhat larger than that of last year ; there have been no fresh arrivals, and the cousumption has reached 3,076 standards against 3,012 last year. There have been several sales at auction and the cargo ex Minnie Swift, from St. John averaged £7 6s. 6d., but a large proportion of the 11 in. and 7 in, was unsold ; the cargo ex John Brice, from St. John, was sold at from £7 to £8 per standard, and ex Victoria, from St. John, at from £7 to £8 15s., but a considerable portion of both cargoes was withdrawn unsold. Several other yarded cargoes were offered for sale and partly sold at similar prices. By private, a cargo of Miramichi has been sold to arrive at £7 2s. 6d. c. i. f., and a large cargo of St. John, good specification, at about the same figure. Quebec pine deals : The stock is now 5,316 standards against 4,769 standards, and the consumption has been equal to the same period last year, viz., 1,071 against 1,079 standards. There have been no fresh arrivals and sales have been by private. Quebec staves : No sales are reported. Palings and laths are in fair request.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

LUMBER

Shingles, Doors, Sash, Flooring, &c.,

WANTED,

STATE QUANTITIES AND PRICE TO

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Head Office, 514 Maine Street, **Winnipeg, Man.**

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EARS FOR THE MILLION

Foo Choo's Balsam of Shark's Oil

Positively Restores the Hearing, and is the only Absolute Cure for Deafness known.

This Oil is abstracted from peculiar species of small **White Shark,** caught in the Yellow Sea, known as CARCHARODON RONDELETII. Every Chinese fisherman knows it. Its virtues as a restorative of hearing were discovered by a Buddhist Priest abont the year 1410 Its cures were so numerous and **many so seemingly miraculous,** that the remedy was officially proclaimed over the entire Empire. Its use became so universal that for **over 300 years no Deafness has Existed among the Chinese People.** Sent, charges prepaid, to any address at $1.00 a bottle.

Hear What the Deaf say!

It has performed a miracle in my case.
I have no unearthly noises in my head and near much better.
I have been greatly benefited.
My deafness helped a great deal—think another bottle will cure me.

"Its virtues are UNQUESTIONABLE and its CURATIVE CHARACTER ABSOLUTE, AS THE WRITER CAN PERSONALLY TESTIFY, BOTH FROM EXPERIENCE AND OBSERVATION. Write at once to HAYLOCK & JENNEY, 7 Dey Street New York, enclosing $1.00, and you will receive by return a remedy that will enable you to hear like any body else, and whose curative effects will be permanent. You will never regret doing so."—*Editor of Mercantile Review.*

☞To avoid loss in the Mails, please send money by REGISTERED LETTER.

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SOLE AGENTS FOR AMERICA. **7 Dey St., New York.**
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EXTRACT OF WILD
STRAWBERRY

Cures Cholera, Cholera Morbus, Dysentery, Cramps, Colic, Sea Sickness and Summer Complaint ; also Cholera Infantum, and all Complaints peculiar to children teething, and will be found equally beneficial for adults or children.

FOR SALE BY ALL DRUGGISTS.

T. MILBURN & CO.,
Proprietors, Toronto.

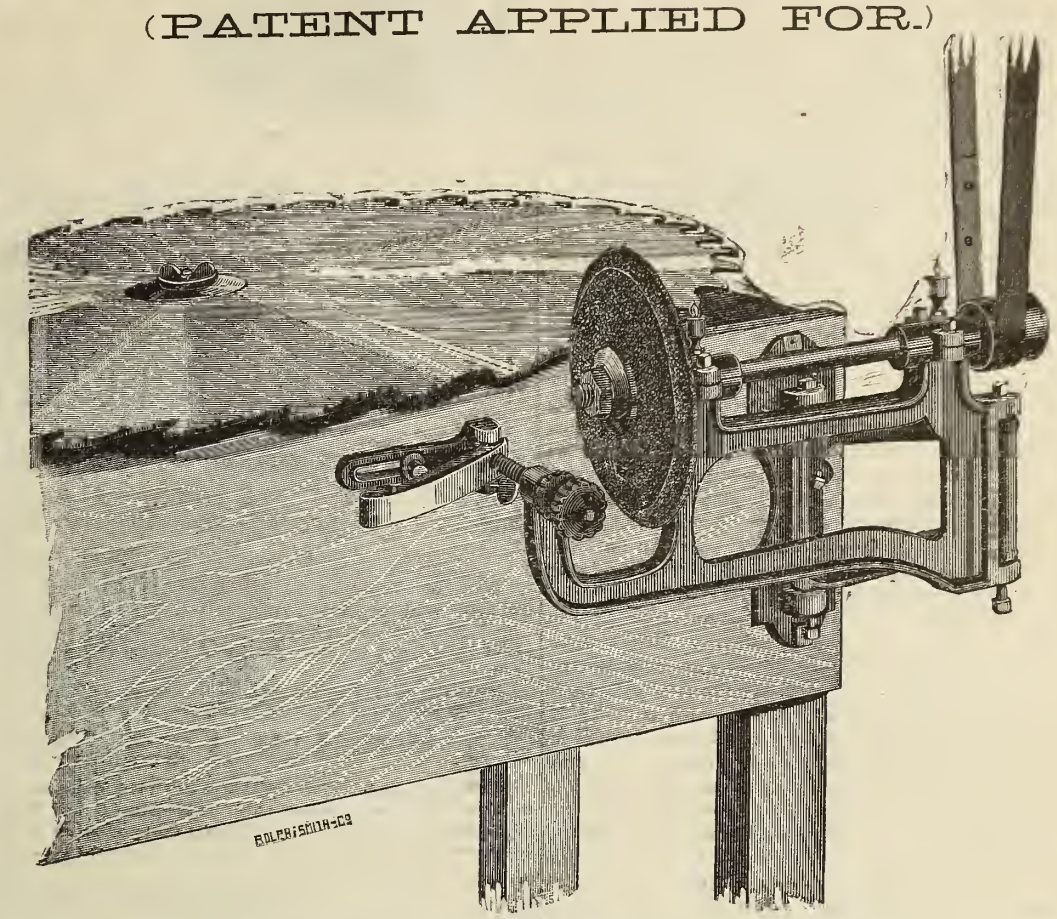
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

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JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

TREE PLANTING.

The Chatham (N.B.) *World* says:—"Few more honorable things can be inscribed on a man's tomb, or mentioned in his obituary, than that he has been a planter of trees. With the feeling that life is uncertain, added to the knowledge that trees are of very slow growth, the man who plants trees is practically working for the benefit of posterity, and is, therefore entitled to the credit of being a philanthropist. Nothing adds to the charm of a cultivated landscape like rows and clumps of trees. Nothing gives so much attractiveness to a house as trees that are not too close and too thick to keep the sunshine from it. Nothing so improves a highway as shade trees by the roadside. Trees afford shade when the sun shines and shelter when the wind blows. They attract the birds and they please the eye. In nine cases out of ten when we analyze the feeling that makes us say a place is beautiful we find that its trees are its chief claims to superiority over hundreds of other places which appear tame and uninspiring.

People—that is, such good people as do not die young—should line the roadside in front of their lands, and border the brooks that cross their fields, and surround the springs on their property, with trees, and plant groves here and there for purely ornamental purposes. The appearance of the country would be agreeably changed in the course of time if this were done.

Quebec, far from being the slowest of the Provinces, is one of the very foremost to take hold of new ideas and put them into practice. There is the Arbor Day idea, for instance. This was originated in a Western State, where one day in the year has been set apart for the planting of trees, and Quebec has laid hold up it and instituted an Arbor Day of her own. Monday was proclaimed for the purpose in some sections of the Province, and trees were planted in Montreal and elsewhere with great ceremony. Trees were named after persons planting them, and the Montreal papers have trees named after them. Trees were planted by members of the Councils of Arts and Manufacturers in the Exhibition grounds, by the members of Parliament and of the press, by the cemetery trustees, and by snow-shoe and athletic clubs and national socities. Besides these society efforts, which were attended by more or less ceremony, the whole force of city laborers was employed at the same work, and many private individuals made a point of planting a tree in their own or public grounds. The Indians of Caughnawaga caught the inspiration and planted trees enough to make their desolate reserve a very different looking place in the course of time.

We hope our readers will imbibe the tree-planting spirit, and make it a rule to do something in the way of beautifying their fields and the highways every year. Every farmer, and every owner of a house lot, should remember that he not only beautifies the landscape but adds to the value of his property by judicious planting of useful and ornamental trees.

A BIG CHUTE.

The *Northwestern Lumberman* has the following particulars from a member of a firm which owns timber on Black mountain, in the Black mountain group, at Asheville, N. C,, a region whore the scenery is of the most rugged and picturesque naturo, and tho climate remarkably promotive of health. The bulk of the timber is cherry, which is quite plentiful through that locality, and of excellent quality and large size. At the foot of the mountains whitewood is the most plenty, with a liberal sprinkling of ash, the latter prevailing higher up. Above the ash line the cherry is found, which grows better in quality as it reaches further up the mountain. The timber is found in covos, or valleys, formed by the ridge-like elevations on the mountains. On Black mountain a chute or slide is arranged, constructed from logs and saplings, down which the heavy logs speed their way. The main chute is over a mile and a half in length, with a side chuto a half or three quartors of a mile loug. The timber is cut as high up the mountain side as two miles, and that felled within a radius of half a mile is conveyed to the chute. The latter follows the coutour of the mountain, and the momentum the logs attain, where the descent is more or less abrupt, is snfficient to easily carry them over the level places or ledges. When a log gets out of its course, its force is so great as to drive one end two or three feet into the ground. The logs are rarely injured much, and are not apt to splinter, except where a small log is in advance of a large one. Mr. Weston has measured trees on Black mountain that were as large as nine feet and nine inches in circumference, that being an exceptional size. He states that properly selected patches of trees would average from 20 to 24 inches in diameter. Some of the trees are 60 feet below the limbs. Walnut grows scatteringly through North Carolina, and very little is found in the Black mountains. After being conveyed to the base of the mountain, the timber is cut for the firm by contract, at a mill conveniently adjacent.

NEW SAW FACTORY.

The property around Charlotte street extension bids fair to become the seat of great manufacturing industries. The works of the Canada Rolling Stock Company, it is to be hoped, will soon be heard in full swing around that neighborhood, but in the meantime, another important factory has been completed, which will, in the course of the next few weeks, be in operation. Mr. James Robertson has finished building his saw factory; the main premises are brick built, three stories high and 100x50 feet. The boiler house and tempering shop cover ground to the extent of 100x80 feet. The factory has been exceedingly well erected by Messrs. Cassidy & Steen. The ground floor is used for an engine room and for the manufacture of saws. The engine was manufactured by Messrs. John McDougall & Co., of the Caledonia Works, Montreal. It is 60 horse-power, the cylinder is 14 inches in diameter, the length of stroke 30 inches, with a driving wheel 5 feet 6 inches in diameter, and 2 feet face. The main shaft runs along the northern end of the building and is connected on the ground floor with three large stones; the first is used for sharpening long saws, the next for circular saws, and the end one for hand work. Connected with the main shaft is the counter shaft, which drives the vertical (used for drilling holes); a machine for cutting the teeth of saws; two ordinary polishing machines; a polishing machine for long saws, and an emery wheel.

In the annex is the tempering furnace, which is 24x20 feet and eight feet high. An oil tank 8 feet deep has been sunk in the ground for dipping the circular saws in, and another tank 3x14 feet, for dipping ordinary saws, is being placed in position. The boiler is at the western end of this building; it is 12 feet 6 inches by 4 feet 6 inches, and is fitted with all the latest improvements. A very large coal and wood shed is also attached.

The second floor of the main building will be used for the manufacture of white lead and putty, and in it have been fixed two putty machines, also two white lead machines, which are connected by a belt with the main shaft on the floor below. This room is splendidly lighted, there being twelve windows on the south, six on the west and six on the north side. The floor above, which is also lighted in a like manner, will be used as a store room. A very fine elevator, manufactured and patented by George Brush, of Montreal, has been fixed on the premises; it is connected with the engine and has been tested to carry two tons.

The engine and greater part of the machinery are in working order, and when worked on Friday the large grindstone made 109 revolutions to the minute. Mr. James Robertson obtains all the steel plates from which the saws will be made from Sheffield, England.—*St. John, N.B., Sun.*

LUMBERING ROADS.

The construction of tram roads, laid with steel rails, becoming quite common in the Southern pine forests, taking the place of the pole road, which is a simple tramway of poles flattened for the car wheels and placed end to end along the surface of the ground. This kind of road has been much used in the South; the ordinarily level and even surface of our pine lands permitting their construction easily and at a minimun cost. Notwithstanding their rudoness they bear immense loads of logs; but as time is a matter of much importance in the hauling of logs as in the transportation of other materials the steel rail tramways are being substituted, and instead of roads only two or three miles long they are being lengthened into the tens and twenties, and reach far into the interior of forests remote from the streams. The extension of tram roads in the comparatively new forests of the South, is indicative of the fact that even here the timber along many of the logging streams is rapidly getting scarcer, and the denudation of the long-leaf pine forests is progressing at a faster rate than it might be naturally supposed. The cheapness with which the logs can be transported on these roads adds materially to the value of the lands in the interior. Recognizing this, parties who have entered large bodies of land arrange their entries so that they will be in contiguous sections, so that extremities can be reached without having to pass through lands belonging to others, and thus place all their lands within easy reach of their mills, which are located at points convenient for shipment by rail and water.—*American Lumberman.*

PULP FROM SPRUCE.

It was with a view to learn something about paper made of wood, and the manner in which the wood is prepared, that the writer accompanied Capt. C. C. Markle to his pulp factories at Markleton, on the Baltimore and Ohio road ninety-five miles from Pittsburg.

They do not use axes or cross-cut saws up there in cutting down trees. The "feller," bores a hole in the base of the tree with an inch auger. The hole is driven in about ten inches the chips removed, and a dynamite cartridge inserted. The dynamite used comes in sticks like a candle, and resembles moist brown sugar. A fuse is attached to the charge, and after it is lighted the men seek a place of safety. In a few seconds there is a mighty roar, and the great tree is lifted into the air, splintered half-way up the trunk.

The trees are cut and split into pieces like cordwood. Almost any kind of timber could be used for making pulp, but the fibre of spruce and hemlock is so straight and soft that it can be worked more speedily and economically than an other available wood. The process is briefly this: The sticks of wood are brought into the mill and thrown into a large funnel which feeds a clipping machine. This machine consists of a large wheel furnished with five knife-blades, and the blades chip the wood off just as the knives of a fodder machine cut straw. The chips are conveyed by an elevator to the second story of the mill, and are dumped into "digestors." They resemble verticle boilers. The chips are fed into the digestors from openings in the top, and then a preparation of soda ash and lime is poured upon them and they are boiled. The pressure of the chips as they spread apart and the fibres separate is immense, and the digestors have to be made to resist a pressure of one hundred and fity pounds to the inch. In a short time the chips become a stringy pulp, and the liquid is run off by a pump and conveyed to the evaporator, of which we will speak later. The pulp next goes through a wet machine where it is strained and cooled. It then passes between rollers and is made into sheets like pasteboard.

The evaporator is supplied with a long battery of small furnaces, above which are the retorts, into which the alkali is pumped from the mill. It is then evaporated until soda ash is the result, and this ash is again used in preparing pulp. There is but a trifling loss in evaporation, and the same alkali is used again and again. A cord of wood will make 1,200 pounds of pulp. About five tons of the pulp will make three tons of paper.—*Pittsbury Times.*

A PORTLAND despatch says that the whole log crop in Maine the past winter amounted to 600,000,000 feet.

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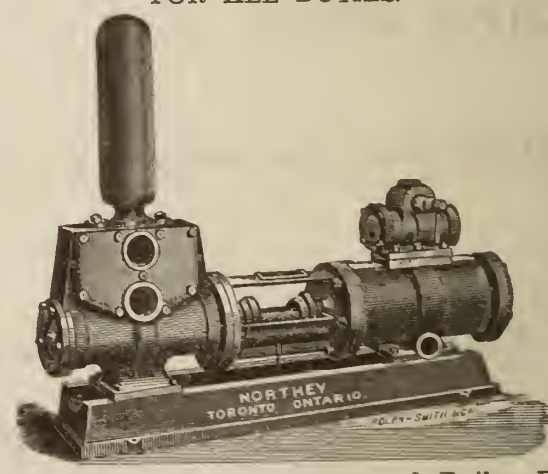

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READY-MADE HOUSES.

The ready-made house business has been mentioned in these columns several times, for the reason that it is a growing industry, and one that will eventually consume a large amount of lumber. The inquiries regarding them are numerous. A gentleman visited the *Lumberman* recently who wanted from twenty-five to fifty houses for a colony that is about starting to Dakota. Such houses for the people settling in that territory, and often in other sections, are just what is needed. In many parts of Dakota it is impossible to buy lumber, and often when lumber can be obtained the services of a carpenter are hard to secure. A ready-made house can be shipped to its destination and erected by any man of ordinary ingenuity. It saves all bother of running around the country after building material and men to put it together. A gentleman called at the office of this paper a few days ago who wanted a house to set up on a lot in the city limits. He could rent the lot during the summer for a small sum, and thus avoid paying big rent, and at the same time have a house of his own to live in that could be handily moved whenever it was desirable to do so. A late inquiry from Philadelphia was made regarding ready-made houses for export, and the same day there came letters of inquiry relating to the same subjcct from West Virginia and New York. These letters, and hundreds of others, show that the ready-made house business is not carried on extensively enough to meet the demand. There is no good reason why a manufacturer of knock-down houses should not use 100,000,000 feet of lumber yearly in this city alone.—*Northwestern Lumberman.*

BEECH CHARCOAL.

The *Northwestern Lumberman* says:—The alue of beech continues to come to the surface. While never esteemed of great importance among the numerous American hardwoods, it has held a high place in foreign countries. It is reckoned in Germany as next to oak in value, and about on a par with Scotch pine. It is prefered there for wagon stock, woodenware, etc. It makes thoroughly odorless butter-tubs. Beech is also an excellent charcoal wood. Thousands of tons of beech charcoal are consumed in European distilleries annually, and distiller's charcoal needs to be a very superior article. Charcoal from beech is also a superior fuel for iron smelting. Some retorts in use for 10 years in Germany, for making wood vinegar are thus described:

The retorts are simply boiler-like iron cylinders three feet in diameter and nine feet long, horizontally placed in ovens like common flue boilers. In front is the door for charging, at the back the opening for the gases to escape into the condenser. Each cylinder contains a basket made of iron bars, for the purpose of quickly withdrawing the charcoal into an iron box, which, to effect gradual cooling, is made air-tight by the use of clay. There are 24 retorts in use, which produce yearly at least 1,200 tons of beech charcoal. The wood used is made three feet long, and all dimensions, even stocks and roots are used—the latter give the same quantity of distillates, but require longer time for charring than the ordinary cord-wood. Each retort is charged with about one-half cord of split wood. Duration of process, 18 to 20 hours, (formerly 12 to 14 hours with less favorable results); temperature about 482 degrees Farenheit. The cooling requires five hours. Each two retorts have one fire-place; coal, sawdust saturated with tar, and also the gases resulting from the process, which cannot be condensed, are used for firing. One cord of beech wood weighed 4,092 pounds, and yielded in the average, 966 pounds of good charcoal, or 23.6 per cent. in weight, the small braize not included. And since one bushel of 2,748 cubic inches of coal weighed 20.38 pounds, one cord yielded 47.39 bushels. In the coalings in meilers the average result obtained in the same district, and with the same wood, was 41.3 bushels per cord, or 1,094 pounds, which brings the weight of the bushel to 26.5 pounds, braize included. These comparative results, extending over a number of years, prove that the specific weight of charcoal made in retorts is very much below that made in meilers, whilst the yield in volume is in favor of the retort.

NEW ENGLAND FORESTS AND WEATHER.

The accounts of the Maine logging are accompanied with laments over the drought which the State has suffered for nearly a year, lowering the wells and lakes, and in some cases robbing manufacturers of their water-power. The connection between the destruction of the forests and decrease of rain seems not to occur to the thrifty and usually far-seeing Down-Easter, and if there is any fear that thousands of men in our northern woods are living off their children's children, it is certainly not expressed. The season's cut is over, and there is now being floated down the Penobscot some 150,000,000 feet of logs, while the Kennebec adds 120,000,000, the Aroostook 70,000,000, the Machias basin 30,000,000, the other sources of log crop supply of the state swelling the amount to about 580,000,000 feet, to say nothing of the ship-timber harvest. Some 10,000 men and 2,800 horses and oxen are required to do the cutting and transporting. If these logs averaged two feet in diameter, and could be placed end to end, they would reach over 36,000 miles, or about once and a half round the earth. One of the beneficial effects of the ancient "forest courts" of England and the governmental supervision of forest lands in some of the continental countries is that the destruction of trees was made a grievous offence against the laws, and this was of inestimable service to agriculture. In many portions of New England (for nowhere have the forest trees been properly protected), it is no uncommon thing to hear old inhabitants refer to dry gullies where in their youth a goodly stream of water used to flow, and unless this matter is better regulated by the authorities and not left to the feeble efforts of village improvement societies and sentimental people of the woodman-spare-that-tree variety, many of our towns and manufactories will suffer more and more for lack of abundant water, the danger from spring floods will be increased, while the farmers will be visited more frequently than they are now with long succession of rainless days and damaged crops. It has been frequently demonstrated in New England that waste lands appropriately set with trees will yield a profit of from $6 to $10 per year; but, owing to a want of system in tree-setting, such as prevails in portions of the West, our hills are being rapidly disrobed and our resources wasted.—*Springfield Republican.*

A BRIDGE TWENTY-ONE MILES LONG.

On Sunday a party, composed mainly of railroad officials and contractors interested in the building of the New Orleans and Northeastern railroad, took a trip across Lake Pontchartrain for the purpose of examining the great trestle work now in course of construction. The entire length of the trestlework work when completed will be twenty-one and a half miles. This distance comprises thirteen and a half miles from People's avenue canal to the point, five and three-quarter miles across the lake and two and four-tenth miles from the north shore. All the piling along the southern shore, with the exception of about one mile, has been driven and this division will be completed by July 1. Of the piling in the lake two and a quarter miles and one mile of the work is completed.

The trestle on the north shore has been finished some time and the rails are laid nine miles, or to Pearl river. The trestlework is all constructed after the same plan, except that the cross-ties are further apart in the approaches than in the bridge proper, and that the timber used on the latter is all creosoted, the description of the bridge will answer for the other work.

This structure, which probably will be the longest of the kind in the United States, will also be one of the most substantial. Experts in railroad building pronounce the sections already finished the most perfect specimens of trestle construction they have seen. The piles average 60 feet in length and are driven about 40 feet. In each bent there are four piles and the bents are 15 fect apart. The caps of the piles are 12x14 inches, and the stringers are 6x16 inches, and three of them on each side laid on edge. The cross ties are only four inches apart, and on them are bolted stringers, which act as guard rails. The ties form a secure decking to the trestlework, upon which the wheels of a car could run without danger of leaving the bridge on account of the guard rails.

The trestlework, from begining to end, is one of the grandest undertakings connected with railroad building in the south. Some idea of its magnitude may be formed from the statement that the quantity of lumber required, outside of the piles, is over 15,000,000 feet. There will be 8,161 bents, of four piles each, or 32,644 piles.—*New Orleans Picayune.*

SAVE THE HARDWOOD.

A local correspondent at Long Lake, Grand Traverse region, Mich,, states that farmers in his section, though they are clearing land rapidly, do not slash the timber down in windrows and burn it up to get it out of the way. They are pursuing a much wiser course. They are making saw-logs of all that is available for that purpose, and fence rails and wood of the residue. The correspondent alluded to, wisely pleads with his neighbors to continue on in the good way of economy, "for the time is coming in the near future," he says, "when these majestic maples will be as it were gold mines to the owner." This advice is encouraging as showing that the farmers of that part of Michigan are awakening to the value of their timber, and that the slaughtering and destructive method sometimes pursued in clearing land is to be changed to a better one. A wanton waste of timber iu that section of Michigan, so near to Lake Michigan, and the great markets of the treeless prairie states, would be simply the most inexcusable folly.—*Northwestern Lumberman.*

Squatter Sovereignty.

The *American Lumberman* of New Orleans says:—"Squatter sovereignty" is a persisteut enemy to our magnificent pine forests, and its rule is everywhere found in the shape of thousands of trees girdled aud left to decay arouud thriftless and abandoned homes, hundred of which are found throughout the pine lands of the South. The vandals generally remain long euough to destroy what they can of what is valuable, and then move to some other section to repeat their work of devastation, an evil as far-reaching and as pernicious in its effect as the forest fire. Both are evils which should as far as possible be cured by prompt and proper legislatiou.

THE Ottawa *Citizen* says:—The brisk trade doue in shingles just now is not confined to Ottawa. The Galleta shingle mill on the Mississippi, owned by Mr. James Sheen, has been runniug to its fullest capacity since early in April, and is receiving custom orders faster than it can fill them.

SOMETHING ABOUT WOOD BENDING.

From a lecture delivered a few months ago by H. G. Shepard, of New Haven, Conn., on the principles of wood bending, we extract the following: If I wished to bend a stick and have it remain in position and keep its shape the best, I should put the heart on the inside, for the reason that the tendency of the wood is to bend from the heart; but when I have a difficult piece of bending to do, like a corner piece, that requires a great deal of upsetting, I invariably put the heart on the inside, for the reason that the heart of the stick will admit of more upsetting and end pressure without giving way, wrinkling or anything of the kind. That is the way I use the heart of a stick. When I wish a piece to remain in a certain shape, then I put the heart on the outside, because the tendency of the stick will be in the direction in which it is bent.

As to the peculiarities of bending, after a piece of wood is bent its character is almost entirely changed. It is wonderful how it is changed, and by that change it is better fitted for any use, I claim, than it was before. Bending makes the wood heavier; it is pressed together, and the same bulk of wood weighs more than it did before. Another peculiarity is that when it is thoroughly dry, it is stiffer than the same sized piece of wood, that is alike every other way in regard to grain. It will admit of more strain, and move less out of its position than if unbent. On this account, it is better fitted for carriage making than sawed pieces. I have taken two circles, one sawed out and the other bent, both of the same character of wood and as nearly alike as I could get them; I placed the concave sides together and put pressure on the ends to bring them in contact. They are subjected to equal strain. I found that the bent piece had perceptibly more influence over the sawed one, than the sawed piece over the bent one.

A piece of timber that has been steamed, whether it is bent or not, has its stiffness increased. It is more brittle than it was before, and, for some uses, it will not do as well; and yet there is a quality of timber that the steaming process and the kiln-drying process affect very much the same; they both cook the gum in the timber and make it brittle and stiff. There is a grade or class of hickory that is benefitted by being steamed or kiln-dried for use as spokes or whiffletrees. There is a kind of hickory that never becomes stiff by a natural process of drying, and one of the desirable qualities of a spoke, rim, or whiffletree is stiffness as well as strength; you take that hickory, and it is the very best we have, and steam it, and it is better fitted for these purposes than it was before. It is difficult to tear apart a piece of bent wood; the fibres are interwoven, one with the other. We do not perceive the change on the outside, but when we come to split the stick open, we find that its character is entirely changed.

WOOD ON EXHIBITION.

A New York daily paper gives an interesting account of the valuable collection of woods belonging to the Museum of Natural History of that city. This collection has occupied several years in making and was presented to the museum by Morris K. Jesup.

At present the Jesup collection and the specimens already in possession of the museum represent about six hundred logs, most of them woods from the forests of North America, and those that are particularly valuable to the worker. The specimens are all representative trees of their family, and show a section six feet long, carefully selected and handled, so that even the bark and the tender fungi which affect it are preserved. The woods represent every State in the Union; and with them are samples of seeds, foliage, fruit and flowers, while near at hand, and in most of them, are the insects, injurious to their growth. The preparation of such a collection is not merely a matter of sawing wood and piling, as many would suppose, but requires no little scientific knowledge. The wood is, of course, received green, and when kept in a warm room, cracks, and the specimen is spoiled. To prevent this, much ingenuity has been displayed by those interested. By boring a hole in the heart of the tree from the exposed section, room was allowed for the pressure following the process of seasoning. This was found satisfactory, but previous to this a number of fine specimens were cracked. As it is essential to builders and others interested to know the shrinkage, etc., of various woods, measurements were made of all specimens before seasoning, so that by referring to the diagram accompanying each log the shrinkage is seen, with other interesting information as to the growth of the tree in every year. This is determined by the growth-rings. In a section from a tree called the Pirde of India, the growth-line is shown in a remarkably manner, being one and seven-eighth inches wide, for the growth of a single year.

The seasoning process completed, the specimens are ready to prepare for exhibition. The idea is to have every log represent every possible treatment that wood is susceptible of, and, undoubtedly, the experiment made will place within the reach of the builder many woods hitherto considered unavailable. Each log is sawed down through the centre about half way and then cut off, and half of it is polished. Thus the bark of the tree is seen, the grain, polished and unpolished, in vertical and horizontal sections. Accompanying the logs are watercolor paintings of the foliage, flower, fruit, etc., in size and coloring, and with them a collection showing the economic value other than for building purposes, namely: the various gums, resins, tar, pitch, turpentine, bark for tanning, the cork, the medicinal properties, etc. Some of the logs are of great size and beauty. The largest is a white ash, nearly 46 feet in diameter, and about 170 years old. The museum also possesses a specimen of one of the giant trees of California, which, however, cannot be placed on exhibition on account of the lack of room. An interesting specimen is seen in the honey locust of Minnesota, in which the bark is a mass of sharp thorns nearly five inches in length. The yucca is a tree lily, with a trunk two feet in diameter, and composed of a spongy, string-like mass of fibres, so that even cutting with any regularity is impossible. The tree is extremely tough, and, since it has been received has at various times thrown out sprouts, a process which, if continued in the cases, will more than meet the wishes of the custodians, and take the place of the colored drawings. In a fine specimen of the spruce from the Rocky Mountain country are seen innumerable perforations, each one containing an acorn, the work of a wood-pecker, which thus lays up its winter supply, encouraging the growth of grubs, which are called for later on. Many of the acorns are so firmly driven in that it is almost impossible to get them out.

One of the most ancient specimens in the lot is a spruce from the same locality. It is about twenty-five inches in cross section, the concentric circles telling the story of over 400 years. This wood is one of the most valuable. The nut pine, whose nuts are eaten by some of the Indian tribes, is a little over half the number of inches in diameter, but nearly as old. A buttonwood, 170 years old, California redwood, and a number of others are equally interesting and valuable. Take it in all in all, this collection is perhaps unsurpassed by any of its kind in the world, and is of great value alike to the student and the practical wood-worker.—*The Lumber World.*

PACIFIC COAST LUMBER INTEREST.

Californians, not content with forcing their way to the front rank as wheat shippers, are beginning to turn their attention to lumber, and are seeking markets where their different varieties of native and Pacific coast woods are likely to be appreciated, Redwood, fir, black walnut, cedar and white pine are available in unlimited quantities, having stood for ages unaccustomed to the assaults of the hardy and persistent woodsman; and it is with a view of introducing those and many other varieties of finishing woods, that capitalists intend entering the field as competitors in eastern and foreign markets. Redwood has been in use here for some time, but builders generally are not fully acquainted with all its merits. It is used for many purposes, rough as well as fancy work. It is lasting, worked up either into shingles or for paneling purposes with a high polish. Recently a shipment was made from San Francisco to Glasgow of Washington Territory red fir, cedar and black walnut, and an assorted cargo of woods followed to London.

The scarcity of the lumber supply in many portions of Europe offers an excellent opportunity for Pacific coast shippers, and with their known energy it would not be surprising to see, at the expiration of a few years, shipments of lumber making from San Francisco and North Pacific ports to Europe as frequently as wheat goes now. At the present time shippers are not fully posted as to the requirements of European consumption, the cargoes forwarded thus far being of an experimental character, simply with a view of ascertaining the tastes. The ventures made in the way of shipments to Panama and other South Pacific ports, have met with such encouragement that the trade of Montevideo and Buenos Ayres in white pine is now viewed with some jealousy. Australia is buying largely in the San Francisco market for building purposes, and the demand is rapidly increasing. Canada and the West, keep a good lookout for your trade, or some fine day you may wake to the fact that instead of a prospective famine in lumber, it may turn out a feast with a surplus to spare.—*Lumber Trade Review.*

LUMBER IN WINNIPEG.

The Winnipeg *Times* of June 5th, reports the following discussion in the City Council:

ALD. G. M. WILSON,—What amount of lumber has been purchased since the commencement of the year altogether?

ALD. OVENS—I bought about five hundred thousand feet myself. I understood Parr bought 150,000 feet, I don't know on whose authority. If he did it on his own responsibility I think he should be made to pay for it. I find that we have purchased already nearly three million feet of lumber—2,700,000 feet, I think. This is going it pretty fast. The cost of the lumber will be some-thing like $67,000. It is impossible for the finance committee to raise ways and means for an expenditure going on at this rate. The cheques issued the other night for lumber amounted to $16,000, and there are $49,000 yet to be paid. The chairman of the board of works informs us that they have discharged a large number of men, but I find the pay sheet last month amounted to $12,000.

The MAYOR stated that the exact amount paid for lumber would be $82,697.

ALD. BURRIDGE asked the chairman of the board of works who had bought this lumber, outside of the one million five hundred thousand feet purchased from Macdonald.

ALD. OVENS—Part was purchased by contract—part by Parr. The board of works authorized me to buy lumber.

ALD. G. M. WILSON said the Council had no idea how much lumber was being bought.

As a result of this discussion a motion, by Ald. Fortune and Brydon was carried, rescinding the resolution authorizing the board of Works to purchase what lumber it required.

TIME TO PLANT.

Two provinces—Ontario and Quebec—have, at the same time, passed laws for the encouragement of tree planting. These laws are chiefly directed to planting on road sides. This limited scope of their direct action must not discourage us; for there is reason to hope that the effect of the example may extend much further. The planting of the road sides with well selected shade trees will of itself change the whole aspect of the country; and what is done there, farmers may soon learn to do along the fence rows. Not only would the scenic effect be pleasing; the ultimate pecuniary results may be made very acceptable.

Some of the best trees and the most valuable, including some nut varieties, are not suitable for road sides. Robbing them of their wealth injure the trees and cause a new form of the small boy—and big boy, too, it is to be feared—nusiance. Government bounty to tree-planting is a justifiable thing, where the only advantage to be got is a public one, where no one will be authorized to cut down and appropriate the trees to his own use. For the same reason, the bounty must stop short of the encouragement of private planting. Here the motive to plant must be found in some form of individual compensation; increased beauty of surroundings or the hope of ultimate profit.

The list of trees to which the public bounty is, by the Ontario law, extended, is altogether too limited. Other than our own forest trees deserve encouragement, in this particular. The want of variety in shade trees, even in cities, is a standing reproach. The easily grown horse chestnut and the maple form the chief stock of these trees. The plane tree and the linden tree of continental Europe are specially deserving of encouragement, and there are other varieties now neglected, well worthy of a trial. Our Canadian forests are rich in the variety of their trees; and where nature has pointed out the way, it is safest to go. But even here, the limitations of natural growth may be greatly extended by cultivation; and varieties not native to the soil may be added with advantage.

In Quebec, "arbor day" got a good send off. There was an official ceremonial, which deserved to fix the event in the public mind. The birth of the Ontario law was not emphasised in a similar way, or in any way; and its existence is scarcely felt or generally known. The new law will, when its provisions are fully known, give an impetus to planting on the road sides. And the example will become contagious. That there will be much planting *en bloc* is doubtful. Few persons are likely to be moved to plant even the most valuable trees, say the black walnut, that a future generation may hope to reap, thirty-five years hence, a harvest of $15,000 or $20,000 an acre, or even twice as much. The fashion may change; it must change for want of material to work upon, and when walnut cannot be got for furniture some other wood must be substituted. Walnut may become the more valuable, from its rarity; but in thirty-five years, it will be almost in danger of being forgotten. Though the growth of this tree, in separate plantations, of large extent, is not likely to be undertaken, their are many spots in which it may be dotted over a farm, without any risk of loss and a very good chance of exceptionally large profit. It is a beautiful tree, and after a few years will pay its way with its crop of nuts.

The first thing to be done is to awaken public attention to the desirability of planting; and this done, the folly of selecting poor trees will soon be understood. In Ontario, we have been cutting down trees for a century: in Quebec more than twice as long—though it must be confessed very slowly at first—and now the time to plant has come. Let us recognize the necessity and act accordingly.—*Monetary Times.*

FOREST FIRES.

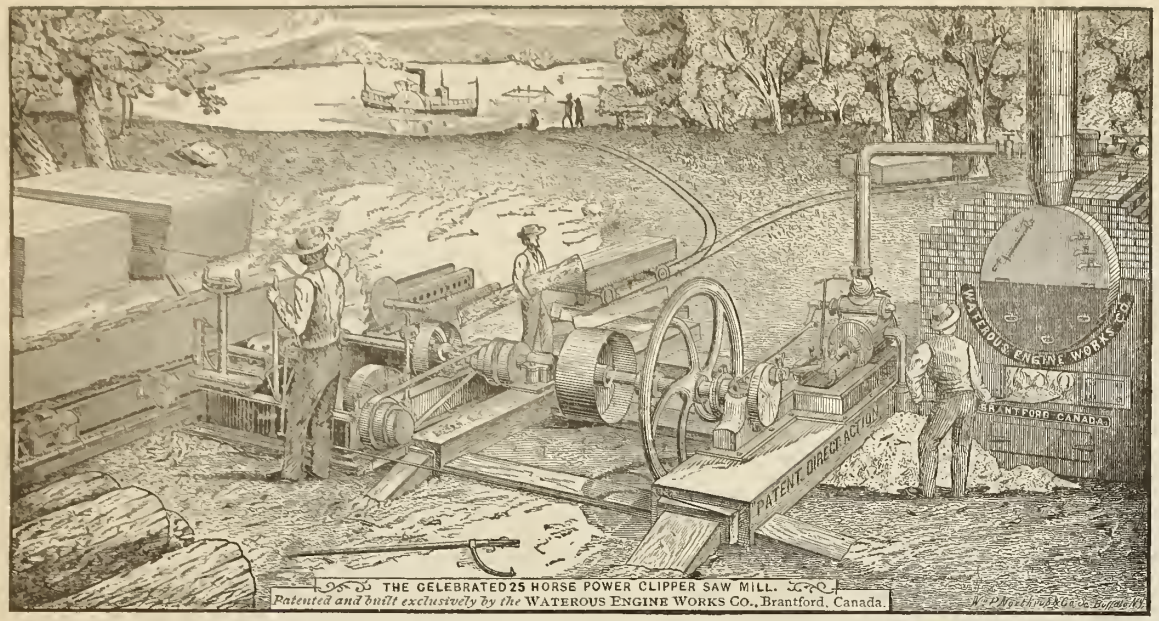
Threatening forest fires are reported in Wisconsin, and the Great Western mine on the upper Menominee was endangered a short time since. A fire near Crystal Falls mine also threatened the Stevenson and Curry mine locations and burned numerous wood piles. Michigan has thus far escaped any destruction from this source this year, but as the dry season approaches, when everything in the woods, especially where lumber operations have been conducted, becomes as inflammable as possible, and is in a favorable condition to feed any flame which may be started carelessly or otherwise, it behooves the utmost caution on the part of settlers, land lookers, hunters, and others, in order to avoid any disastrous results such as were visited on some portions of the state in 1880. The memorable lessons on those dark days in the history of the state, it is to be hoped will serve as a sufficient warning against any carelessness in the future. An ounce of prevention is worth a pound of cure, and all persons engaged in the woods, or who "camp out" over night should see to it that camp or other fires are fully extinguished and not left to be fanned into a blaze by the passing breeze, and perhaps spread devastation, ruin and death to an unlimextent.—*Lumberman's Gazette.*

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

Semi-Portable and Portable Direct Action and Belted Saw Mills!

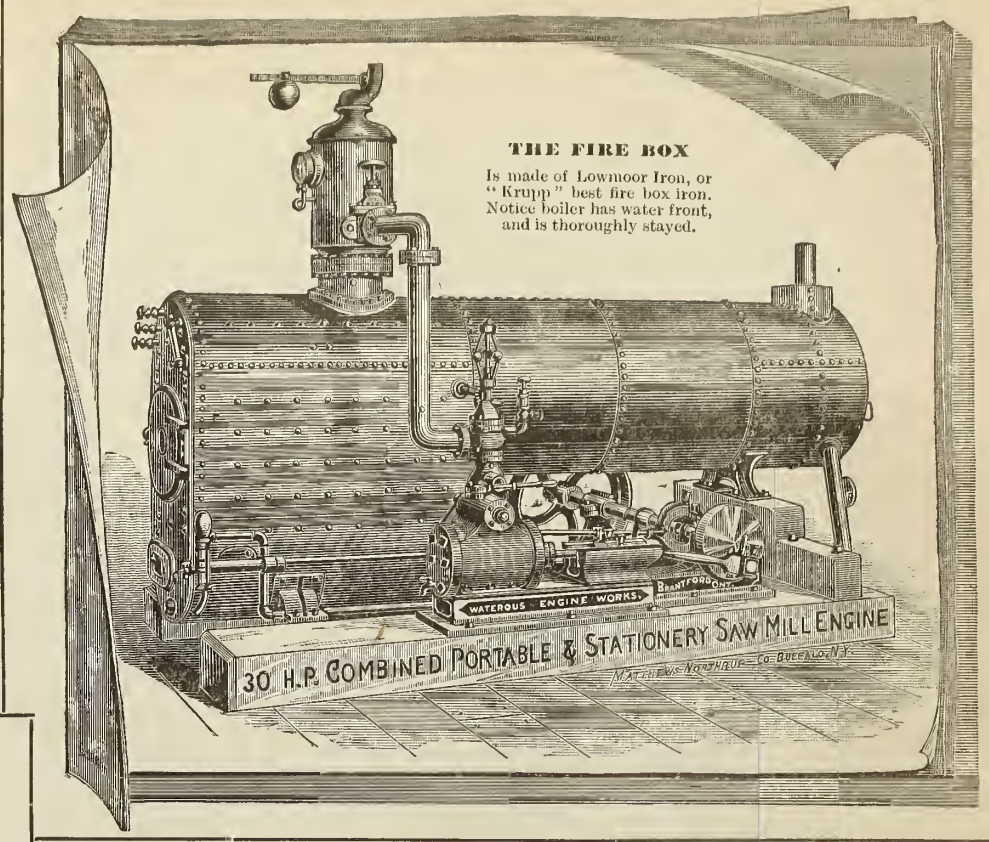
TEN DIFFERENT SIZES.



THE GELEBRATED 25 HORSE POWER CLIPPER SAW MILL.
Patented and built exclusively by the WATEROUS ENGINE WORKS CO., Brantford, Canada.

Above cut represents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

☞This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.

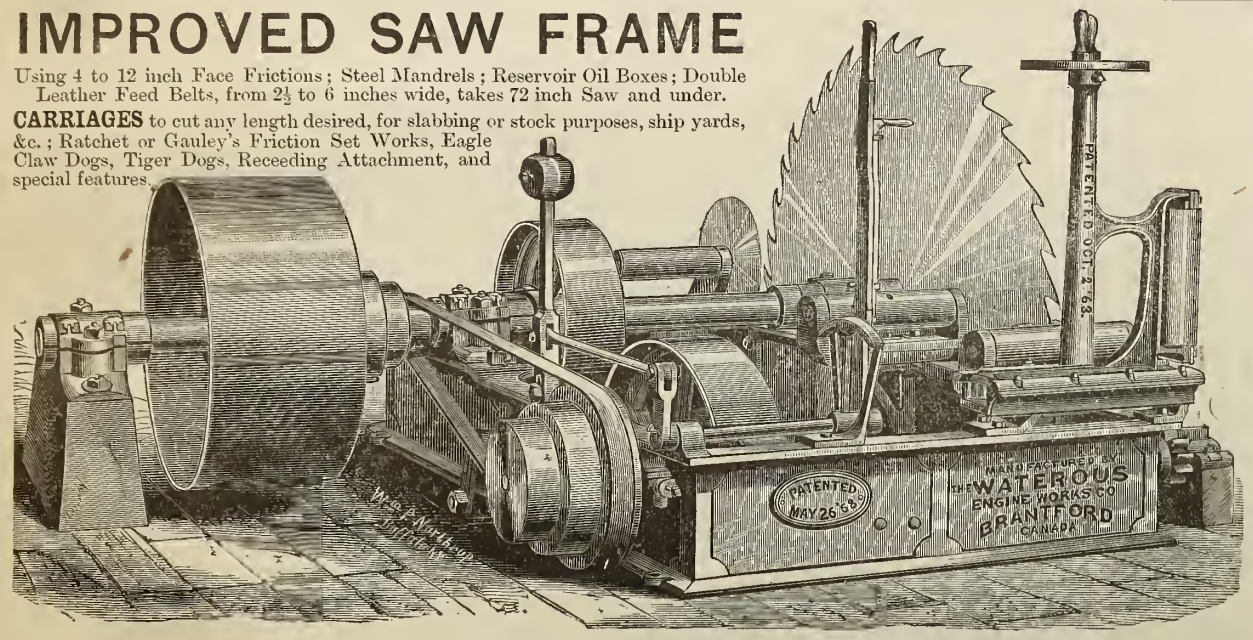


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec.
Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

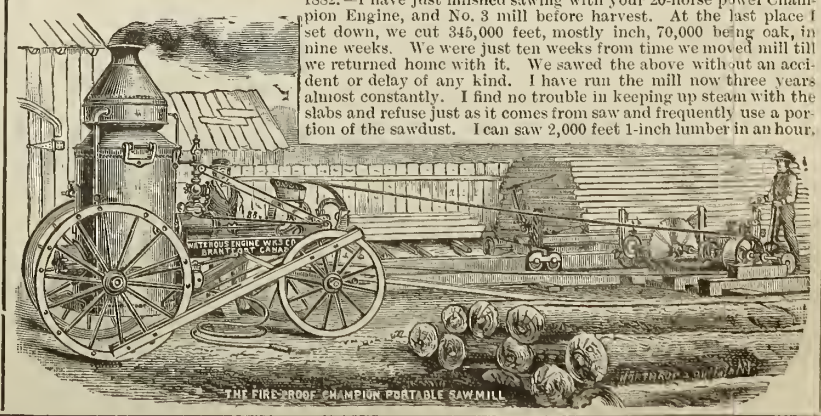
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



THE FIRE-PROOF CHAMPION PORTABLE SAW MILL

The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Ranche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon.
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co.,
W. W. Stewart, Montreal

Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

WATEROUS ENGINE WORKS CO., Brantford, Canada.

Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

LUMBER IN AGRICULTURAL IMPLEMENTS.

The total annual consumption of lumber in the manufacture of agricultural implements in Chicago, amounts to about 20,000,000 feet. Of this about 7,000,000 feet are pine. Three-quarters of the remainder is ash, the great staple. Oak is the factor of next importance, but it is not used to the same extent that it is in the wagon making industry, where it commands a higher place. Hickory, maple, elm, whitewood and basswood, and Norway and white pine are the other kinds of lumber employed.

There are several reasons why ash is preferred, universally, in this line of work. It combines numerous features of general adaptability, hardly found together in any other wood. Its stiffness, durability, freedom from knots, ease in working, and some other facts worthy of consideration are urged in its favor. While white oak is a tough and strong wood, it is more expensive and not so readily obtained in large quantities, and at the same time it is considerably heavier than ash; and lightness, in connection with strength is a combination sought for. There seems to be hardly a purpose, where substantialness is a requisite, outside of building, for which ash is not peculiarly adapted, and preferred. It fills the bill perfectly in a great many particulars of manufacture, and the industrial world is watching a diminution of supply with much concern and regret. Ash is the chief element, in the lumber direction, of all agricultural implements, with a possible exception or two. It is generally admitted that the stumpage supplies of ash are getting sadly reduced, and that Ohio and Indiana are pretty well denuded in some sections. While a preference may be had for that growing in these states or in Michigan, there seems to be but a small choice in the matter, for good ash grows in several states. Illinois produces some, and a good article is obtainable from Arkansas, and elsewhere. While some woods vary materially in different states, to a large extent ash is ash, and requires no pedigree to recommend it. White ash is the only variety that suits the maker of agricultural implements. He will use neither black nor grey ash, if he knows or can avoid it. Black ash, while disliked, is at the same time, where a good article is obtained, a very serviceable wood, and would answer the purpose very well, though inferior to white ash. It is asserted that sometimes black ash is mixed in with other ash, and the manufacturer does not always discover the difference. Yet there is a common prejudice against it.

The office of hickory is sufficiently well known, and in the making of agricultural implements it is used where its peculiar characteristics make it especially desirable. Maple is employed chiefly where a smooth surface is required, and, though sometimes used for the frame work and strong parts, in place of ash, it is not nearly so good. Its durability is less, atmospheric contact affecting it more seriously. Its proper place is regarded to be under cover. On the other hand, ash, oak and hickory, are of noted excellence in withstanding exposure. Rock elm is used for neck-yokes, whiffletrees, etc. It has an inclination to get out of shape, under the influence of the weather, which makes it less desirable than some other woods. Whitewood and some basswood is used for such purposes as rollers, and where inch lumber is required, and principally in the making of harvesters, reapers and mowers. In the latter machines, considerable Norway pine is used in the platforms and bottoms. An immense amount of white pine is also consumed in constructing boxes in which to pack the machines, which, because of their large size and the necessity for thorough protection during transportation, sometimes of long distances, must have an unstinted supply of lumber.

One reason why more oak is not used in the industry is that a good article is in such demand for wagon making, and so readily taken, that it commands a price that makes it decidedly less economical in the manufacture of implements than ash, which is nearly as durable and fully as good in other respects.

The force of circumstances all the time has a tendency to reduce the amount of lumber required in the making of agricultural implements. The fact that the desired lumber is continuing to become scarce, and that in implements great strength and durability are required, is leading to a policy and an effort toward using as little lumber as possible. That is, iron and steel are put in wherever it is possible, the great study being to secure the same amount of strength with the minimum weight. Iron plow-beams are now largely made instead of wood, an item in itself. A firm in this city is now trying to make a steel wheel adaptable, where formerly it was part wood. There are other details in which the same result is sought.

A large amount of thick lumber, and considerable inch stuff are used in the agricultural implement industry, and generally the best lumber is required. There are in Chicago three large concerns, two making harvesters, reapers, mowers and binders, and one making plows and cultivators, who consume all the lumber so employed in this city, with the exception of scattered thousands that go to small repairing establishments. Jobbing depots for the distribution of such goods are, however, numerous, and some of them do an immense business. Implements are handled from the manufactories scattered over the country, east and west. The home manufacturers mentioned have large establishments, one of them consuming alone 10,000,000 feet of lumber annually.

Retrenchment is an important thing in manufacture, and these consumers apply the theory rigidly to their lumber purchases. They aim to buy just what is wanted, as any sagacious business man might be expected to, as advantageously as possible. Their bulk supplies come mainly direct from where produced, and are generally cut to order. Yes, so large is the consumption, and the requirement in case of shortage so urgent, that the city yards secure considerable trade from that source, because they are apt to have very desirable dry lumber that cannot be drummed up in the country in a hurry. The buildings of the two harvester firms cover acres of ground, and either of them employs in busy seasons from 1,000 to 1,500 men.

Kiln-drying is regarded as detrimental to the virtue of the lumber, which must necessarily be submitted to considerable grief after it is put into a machine, and large stocks are kept in pile at the yards of the manufacturers. About a year's supply of dry lumber is kept ahead, and from 4,000,000 to 7,000,000 feet are usually in stock. Both the concerns mentioned have large piling grounds, extensive docks, good railroad facilities, and own or lease saw mills, hence enjoying all the advantages securable by the shrewdest lumber dealer. They each consume from 30,000 to 50,000 feet of lumber daily during a season of brisk operations. One of these establishments made about 30,000 implements last year, and the other went ahead of that record. About 100 feet of lumber go into a mower, 350 feet into a reaper, and 500 feet into a harvester, including waste. The plow and cultivator works mentioned, though a large concern, uses only about 1,500,000 feet of lumber annually.

Felloes are generally secured already shaped from bending factories, but one concern in the line mentioned, in this city, has facilities for this work. An apparatus has been rigged up in a shed that answers every purpose, and yet, might be considered a somewhat awkward contrivance. It was originally an old sorghum mill, but it never caused the saccharine liquid to meander from the succulent sugar cane with any more expedition and facility than it wraps the ash around into the required form. Steaming the wood makes it thoroughly pliable, and all that is required is sufficient force expended in the right direction, to get a piece of timber in the proper form. The device in question has a strong wooden block affixed to a large iron wheel, the former having a notch at one point of the circumference so as to permit a piece of stuff to wind around it without lapping. A piece of ash 1¼x8 inches and 10 feet long is placed between the block and a band of strong sheet iron, and as the machine is started both the timber and the band wind firmly around the circular block. The band holds the lumber in place, and keeps the outer surface from breaking. About a six horse-power engine is applied to the contrivance, and a single revolution is made for each felloe. To save time and effort, the felloe is immediately placed inside an iron rim in shape to go on a machine. Very few felloes are spoiled, and only in the case of bad lumber. A piece of bent wood will dry in a few hours, in the open air, and it is then fast in position, barring a tendency to yield a little. A smaller felloe is bent by being screwed to a form. In the process of bending the wood simply stretches outwardly, and is compressed inwardly, with reference to the surface, doing the former more readily than the latter. Most articles are bent on forms. Several kinds of wood can be bent, but maple is one of the woods little adaptable in that way. Where the timber is heavy, a very thorough steaming and adequate power must be secured. In heavy work where it was once the plan to saw the materal into shape, mechanism has been devised by which the stuff can be forced into any required form, even to the heavy timbers used in ship-building.—*Northwestern Lumberman.*

DYING SPRUCE.

BANGOR, Me., May 19.—I have seen nothing of the assumed rapid destruction of spruce by borers, about which so much has been said, but I have heard of the timber dying in large districts on the Miramichi, in New Brunswick, and on some branches of the St. John, the Aroostook, Fish River, and Allaguash, in northern Maine. But, from all I have heard, the borer does not attack young or thrifty trees; so, whether the dying of the timber is the effect of borers, or the borers an effect of the dying timber, I cannot say. No doubt the death of an old tree in decrepitude may be hastened by borers, severe drought, or other causes. Generally, where the spruce is old and about all of an age, and about ready to die of old age, the borers are said to kill as much as three-fourths of it in spots, in some localities. We have seen nothing of this yet on the Penobscot, or any of the Maine rivers except the Upper St. John. On all these rivers the aged spruce has generally been culled out, and the forest now consists almost entirely of comparatively young and thrifty, growing trees. I have heard of no borers in those localities, and do not believe that it will pay any class of insects or their larva to attack any such thrifty forest. Our Maine forest will be forest a thousand years from now, because the land is worth more to raise wood on than for any other crop. The Pilgrim Fathers and their descendants cleared, plowed and cultivated a million of acres in New England that *is now forest.* So we have to take good care of our forests and manage them properly, and it is our policy to cut and market all the decaying, decrepit trees—pine, spruce, hemlock, etc.—to save them from death by worms, rot, heavy winds, droughts, and the natural death from old age. We do not generally have any trees cut smaller than 14 inches at the stump; nor do we generally cut in any one year more than one-tenth of the wood growing on an acre of land. These reports of the general dying of timber are no doubt much exaggerated. On townships that I am familiar with on the St. John where much of the timber is reported dead, the soil was poor, the growth thin, and the trees rather small and short-bodied; and generally what spruce trees there were scattered here and there in the forest of pine, cedar, birch, beech, maple, fir, juniper, etc., were past their prime, not growing at all now, and always had been of very slow growth. Much of the forest is worthless—small, though ancient, fir—like what we find on the foothills of our mountains, while there are very few young spruce under 12 inches at stump. From all I can learn, most of the reports of damage by the borers come from such lands as these.

Henry M. Prentiss.

THE MATERIAL AND MANUFACTURE OF CANES.

The manufacture of walking stick and umbrella handles is an industry in which a great deal of capital is invested, The material is as various as can well nigh be conceived of. The Chicago *Times* recently had an article on the subject, from which we extract:

Many are of imported woods, some from the tropics, China, and the East Indies. The celebrated Whongee canes are from China, where they are well known and celebrated for the regularity of their joints, which are the points from which the leaves are given off, and the stems of a species of phyllosiachys, a gigantic grass, closely allied to the bamboo. The orange and lemon are highly prized, and are imported chiefly from the West Indies, and perfect specimens command enormous prices. The orange stick is known by its beautiful green bark, with fine white longitudinal markings, and the lemon by the symmetry of its proportions and both prominence and regularity of its knots.

Myrtle sticks possess also a value, since their appearance is so peculiar that their owner would seldom fail to recognize them. They are imported from Algeria. The rajah stick is an importation. It is the stem of a palm, and a species of calamus. It is grown in Borneo, and takes its name from the fact that the rajah will not allow any one to go out of the country unless a heavy duty is paid. These canes, known as palm canes, are distinguished by an angular and more or less flat appearance. Their color is brownish, spotted, and they are quite straight with neither knob nor curl. They are the petioles of leaf stocks of the date palm. Perhaps the most celebrated of the foreign canes are the Malacca, being the stems of the Calamus sceptonum, a slender climbing palm, and not growing about Malacca, as the name would seem to indicate, but imported from Stak, on the opposite coast of Sumatra. Other foreign canes are of ebony, rosewood, partridge or hairwood, and cactus, which, when the pitch is cut out, presents a most novel appearance, hollow and full of holes.

The manufacture of canes is by no means the simple process of cutting the sticks in the woods, peeling of the bark, whittling down the knots, sandpapering the rough surface, and adding a touch of varnish, a curiously carved handle or head, and tipping the end with a ferrule. In the sandflats of New Jersey whole families support themselves by gathering nanne berry sticks, which they gather in the swamps, straighten with an old vice, steam over an old kettle, and perhaps scrape down or whittle into size. These are packed in large bundles to New York city and sold to the cane factories. Many imported sticks, however, have to go through a process of straightening by mechanical means, which are a mystery to the uninitiated. They are buried in hot sand until they become pliable. In front of the heap of hot sand in which the sticks are plunged is a stout board from five to six feet long, fixed at an angle inclined to the workman, and having two or more notches cut in the edge. When the stick has become perfectly pliable, the workman places it on one of the notches, and, bending it in the opposite direction to which it is naturally bent, straightens it.

Thus sticks apparently crooked, bent, warped and worthless are by this simple process straightened; but the most curious part of the work is observed in the formation of the crook or curl for the handles which are not naturally supplied with a hook or a knob. The workman places one end of the cane firmly in a vise, and pours a continuous stream of fire from a gas pipe on the part which is to be bent. When sufficient heat has been applied, the cane is pulled slowly and gradually around until the hook is completely formed, and then secured with a string. An additional application of heat serves to bake and permanently fix the curl. The under part of the handle is frequently charred by the action of the gas, and this is rubbed down with sandpaper until the requisite degree of smoothness is attained.—*Scientific American.*

A TREE MADE FAMOUS.

A correspondent of a New York paper says: "An incident of early days on the Delaware is always recounted with pleasure by the old inhabitants, and as they vouch for its authenticity it must be true. In 1786 Simeon and Franklin Westfall, of New Jersey, took the contract to furnish the government with a white pine tree, which was to be of extraordinary size, as it was wanted for the main mast of a war frigate about to be built. They were to receive $100 for the stick. They hunted the Delaware valley from the Neversink to its head waters, but were unable to find the tree which

would answer the specifications of the contract. At last, when they were about to give up the search, they came upon a pine which they believed would suit. It was on an eminence in Pike County, near the present village of Mast Hope, and three miles from the river at Big Eddy. Upon measuring the tree they found that it was too short by 10 feet. Upon digging at its root, however, they discovered that the tree ran straight down in the earth, and they succeeded in excavating the lacking 10 feet. The tree was felled, hauled to the river, and floated to Philadelphia, and became the mainmast of the frigate Constitution, "Old Ironsides," and carried the American colors in all the glorious victories won by that vessel in the war of 1812."

MANITOBA LUMBERING.

It is stated in a recent issue of the Winnipeg *Sun*, that no less than seventy-eight million feet of lumber has been cut during last winter by the various firms operating in that article in Winnipeg. This quantity has not been all cut in Canadian territory, one firm cut about 7,000,000 feet of lumber in the vicinity of Ottertail Lake and River in Minnesota during the winter. This will be floated down in the course of a couple of weeks to the mill at St. Boniface. Another company cut 10,000,000 feet in Minnesota in the Clearwater River district. This lumber will be floated down the Red River, and sawed at Winnepeg. The total mentioned is arrived at thus :—

	Feet.
Rainy Lake Lumber Co. cut	14,000,000
Rainy Lake Lumber Co. had on hand	7,000,000
J. R. Sutherland & Co. cut	7,000,000
Dick & Banning, L. Winnipeg	3,000,000
Dick & Banning, Lake of Woods	10,000,000
Mr. Ross, at Whitemouth, cut	3,000,000
Schneider & Schneider cut	3,500,000
Keewatin Lumber Co. cut	12,000,000
Winnipeg Lumber Co. cut	15,000,000

These figures give a total of 73,500,000 feet. The *Sun's* total at 78,5000,000 is arrived at by adding 5,000,000 feet which Dick & Banning have arranged to purchase in Minnesota. The conclusion is reached by that journal that "the supply this year will exceed the demand, which is reported to be not so large as it was last year. The price of lumber, too, is reduced this spring, only $25 per thousand feet being asked for lumber which last spring brought $32. The class of lumber cut this year has been very superior, as there were many complaints last year of the lumber not been very good. Nearly all the mills have already been set in operation, and in a few weeks newly sawn lumber will be shipped into Winnipeg in large quantities.

THE OLD STORY.

A great fire at Groton Pond, 23 miles from Montpelier, Vt., on May 10, originated by burning brush in the woods. Besides spreading through the timber, it burned the depot of the Montpelier & Wells River railroad, the waterhouse, 400 cords of woods, a large steam mill, several tenement houses and stores, 200,000 feet of dressed lumber, 400 cords of bark, a lot of barrels, 58 ox sleds, 3 car loads of hay, 23 freight cars, burned out several families with their live stock, the people taking refuge on the pond in boats and on rafts. The mill property was owned by Alvah T. Baldwin, of Wells River. His loss is $100,000, with little insurance. After destroying the mill property, the fire ran along the railroad and burned Peabody station. The territory along the track for six miles is laid waste, the timber, buildings, fences and all improvements being swept away. The loss to the railroad is estimated at $25,000. John Morse was seriously burned. Mr. Baldwin, proprietor of the mill, was forced to take refuge in a brook that ran under the railroad.—*Northwestern Lumberman.*

MONTREAL NOTES.

The *Gazette* of June 1st says :—The local trade in both hard and soft woods has been considerably checked by the constant wet weather, but no material modifications have occurred in prices except for laths, which have declined since our last report 50c. per 1,000 to $1.50. This figure allows a shrinkage of $1.50 per 1,000 since the new make came in. Last year they fell to $1.35. There is some export demand for ash. The old stock of hardwood is well cleaned out, but the new wood is too green to handle. Last season's high prices occasioned a large cut, and an over supply this year is anticipated. Regarding the export trade, we noticed liberal shipments of deals to British ports, steamer freights being quoted at 65s. to 67s. 6d. for Liverpool and Glasgow and 67s. 6d. for London. The South American lumber trade has up to tha present exhibited no life, and we hear of only one charter to the River Platte this season, and that was made some time ago, at $13.

WINNIPEG NOTES.

The Winnipeg *Commercial* says :—Although building operations are increasing a little in the city, the amount of work going on is by no means commensurate with the immense piles of lumber in many of the yards. The supply is far in excess of the demand in the city, and country requirements are scarcely up to expectation. Dealers will undoubtedly find a market for all their stocks, but to judge from present appearances they may have some time to wait. There has as yet been as little cutting in prices as possible on the one hand, and on the other builders are having their wants supplied from the cheapest source. Holders of large stocks will probably suffer in some degree on account of the reduction in freight rates, by which dealers are now able to reduce prices of lumber from $2 to $3 per thousand feet.

VALUABLE WATER-POWER.

It is contended, in the Winnipeg *Free Press*, that the water power at Rat Portage is equal to 300,000 horse power, and superior to that of Minneapolis of which we have heard so much. That journal gives a list of the lumber mills at and around Rat Portage, with the cutting capacity of each :

		Feet per Day.
Rainy Lake Lumber Co. (H. Sutherland & Co.		
Mill at Fort Frances	do	50,000
Mill at Rat Portage	do	100,000
Winnipeg Lumber Co., (Jarvis & Berridge)		75,000
Bulmer, Bailey & Co		80,000
Keewatin Mills, (D. L. Mather)		75,000
Dick & Banning		50,000
Hunter & Co		100,000
Contractor's mill, (Vermillion Bay)		15,000
The American Co.'s new mill will cut		100,000
Total, nine mills		645,000

The paper making interest will be represented by two mills under construction and to be in operation during the coming summer. The country affords an immense quantity of material for the manufacture of pulp. Locations for grist mills have been surveyed with a view to building whenever the through route to the East has been opened for traffic. One of these locations is owned by Hespeler & Co., of Winnipeg, another by D. H. McMillan, and one by Minneapolis firm. The Hudson's Bay Company own the finest location of all, and intend some day erecting a mammoth grist mill on their property.—*Monetary Times.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. JUNE 15, 1883.

CONSIDERABLE timber planting is being done in Umatilla county, W. T. Walnuut, ash, box-elder, maple, white oak, and other trees flourish in that region.

THE Ashland Lumber Company, of Ashland, Wis., recently sold two cargoes of white pine deals to be shipped to Liverpool, England, by the Welland canal.

THE total lumber cut of Wisconsin and Minnesota last year exceeds four billion feet, representing the growth of 1,250 square miles. This is the largest cut in the history of the North-West.

THE men engaged in driving the Swift river, in Maine, were discharged, and 5,000,000 feet of logs were hung up—probably for the season, it was thought, but recent rains have started the drive in good shape.

THE American Lumber Company, with mills at Dollarville, intends to ship 20,000,000 feet from St. Ignace, Michigan, this season. The company's mill at present cuts 80,000 feet a day, and its capacity will be increased to 100,000.

IT is whispered in New York that a "corner," prominent in which are English capitalists, have bought the largest remaining tracts of black walnut lumber and expect to drive the rates high. In other woods the prices are very low.

THE Brandon correspondent of the Winnipeg *Commercial* says:—Mr. Grigg, of London, is about to build a large saw mill near the Brandon flour mills, he is the owner of large timber limits in the Riding Mountains, and he intends to do a large lumber business here.

AN Ottawa despatch says:—Large quantities of square timber are being shipped by rail to Quebec. It seems probable that before many years the bulk of the upper Ottawa cut will be marketed in this way. At present the freight rates are somewhat in excess of the cost of driving, but as soon as a sufficient number of properly constructed cars are placed on the line better rates will probably prevail,

THE Belleville *Intelligencer* says that about 360,000 feet of timber will be brought here this summer from Lakefield and Midland, over the Midland Railway, provided the streams which float the timber do not become so low that the drives cannot reach those places.

A KINGSTON despatch of June 5th, says:—During the last week there were discharged at Garden Island 186,000 feet of square timber, 100,084 pine staves, and 54,090 West India staves, which at the present market value would be worth the snug little sum of $247,000.

IN buying wood-working machinery, the very best rule for guidance is that good old one, "the best is the cheapest." It don't pay to buy cheap materials or cheap workmanship, and cheap machines generally mean both of these. Cheapness is apt to prove an expensive investment in the long run.

A Montreal despatch says:—The deepening and widening of the Grenville and Carillon canals has been the means of stimulating a great increase in the traffic this season. Formerly barges carrying only 130,000 feet of lumber could pass through, whilst now vessels with a capacity of 400,000 feet can easily pass through.

A CURIOUS instance of the durability of oak recently came under our notice in an advertisement which announced a sale of old timber, taken from the bell-loft of St. Micheal's Church, Heighington, Durham, the wood being about 450 years old. It is curious, after being in use during so long a period, that this oak should again come under the hammer for public sale.

WOODEN tooth-picks are now considered to be one of the necessary adjuncts of the hotel dinner table, and many of those persons who have occasion to use them have doubtless, more than once, wondered where they all come from. In the small town of Sebec, Piscataguis county Maine, U. S., there is factory which employs from 12 to 15 girls, and eight or ten men, and turns out daily a two-horse load of this little wooden implement. A thousand cords of poplar and birch wood are annually consumed at the factory.

AN Ottawa despatch says that large quantities of square timber are being shipped by rail to Quebec *via* the Canadian Pacific Railway. It seems probable that before many years the bulk of the Upper Ottawa cut will be marketed in this way. At present the freight rates are somewhat in excess of the cost of driving, but as soon as a sufficient number of properly constructed cars are placed on the line better rates will doubtless prevail. The first raft of the season has passed through the Chaudiere slides. It contained 94 cribs and is owned by Messrs. A. and P. White, of Pembroke.

MESSRS. Grigg & Macgregor are building a saw mill at Brandon. It will have a capacity of 10,000 feet a day to start with, afterwards to be increased, as the necessities of the business demand. The limit on Swan river comprises 32,000 acres, two-thirds of which are reported as heavily timbered. Unfortunately there is a portage of ten miles in order to reach the Assiniboine, the Swan flowing into the Winnipegosis; but once the business gets thoroughly established it is intended to construct a tramway to facilitate the transportation, It is estimated that the portaging with teams will cost about three dollars per thousand feet.

THE trees most valuable for the manufacture of wagon wheels are given as follows:—Black locust, rock elm, white oak, white birch, white elm, white gum. Black locust is placed first in the list, because of its great durability, and its having a solid compact fibre. It shrinks very slightly, only one-third as much as white oak, and less than any other in the list. It is susceptible of a high polish. The only objections to it are its extreme hardness, and the fact that glue does not readily adhere to it. In localities where wagons are constructed to carry all weights from one to fifteen tons it has stood the test when all others failed,

THE Oshkosh *Northwestern* says:—The Webster Manufacturing Company recently purchased an immense tract of hardwood land, containing 43,000 acres, about 50 miles from St. Paul, for which they paid in the neighborhood of $300,000. The St. Paul company are going to run a branch of their road through it. The Webster company will at once build two large mills, a hub and spoke factory, and a barrel factory on the tract. It is is expected that the timber will more than pay for the land, and the land itself, when cleared will be of immense value, it being of good quality and well located. No doubt they will make a mint of money out of this mammoth deal.

TO give ordinary wood the appearance of the most beautiful specimens of walnut, adapted to the very finest cabinet work, the wood must first be thoroughly dried and warmed, then coated once or twice with a liquid composed of one part by weight of walnut peel, dissolved in six parts of soft water by heating it to boiling point, and stirring. The wood thus treated is, when half dry, brushed with a solution of one part by weight of bichromate of potash in five parts of boiling water, and, after drying, is rubbed and polished. The color is thus said to be fixed in the wood to the depth of one or two lines, and in the case of red beech or alder, for instance, the walnut appears the most perfect.

ENGLISH PROSPECTS.

The *Timber Trades Journal* says:—Up to the end of April our table gives the following results as to the following places enumerated:—

London has imported less than last year up to April 30th by ..... 26,130 loads

Liverpool	7,427	"
Hull	14,639	"
Grimsby	11,454	"
Hartlepool	8,614	"
Newcastle	12,110	"
Gloucester	1,520	"
Lynn & Wisbech	4,717	"
Total	86,611	

short imported compared with the first four months of last year by only nine ports, some of them not by any means first-rate, and many others might be added, but the difference is not sufficiently significant to be worthy of notice individually. On the other hand, some ports have essentially exceeded their last year's business up to the same date; but these are chiefly great depots for pit-props and mining timber, such as:—

Cardiff, which is in excess	11,294	loads
Newport, still more so, with	14,302	"
Swansea	2,145	"
Portsmouth, which imported very short last year	1,422	"
South Shields	6,695	"
Total in excess	35,858	"

of last year; but as we stated in our remarks on the Board of Trade returns, May 12th, the whole shortage at the end of April, was about 127,000 loads behind last year. Nor do our reports since then indicate any increase in the rate of importation likely to have any considerable effect in reducing the figures ascertained as the quota of arrears up to that date. On the contrary a deficiency may be counted on also in May, in comparison of May 1882, unless the last week of it should be on a more plentiful scale of import than those that are already behind us. Nor can any established fact be more calculated to reassure the home trade than this of very moderate importation up to date, and if in June it be found that the supplies do not increase by comparison with last year, the trade will probably be considered in a very healthy condition, which is only a short step from prosperity. The only thing it has to fear is the pressure in the money market, which is liable to cause the country banks to restrict their business, and turn away paper they were accustomed to discount, and this is apt to cripple the trade of their respective neighborhoods, and cause prices to decline, as sellers desirous to realize are in such cases more plentiful than buyers anxious to lay in stock,

This is the cloud no bigger than a man's hand, that may by and by assume portentous dimensions, or it may blow over and leave trade to flourish without interruption.

Money regaining its usual equilibrium in this country and America—nor is it yet seriously disturbed—a good fall trade may be safely predicted for those importers of timber goods who choose to limit their transactions to the customary requirements of the connection they have established around them, and fortunately at this time there is not much disposition manifested to enter into unadvised speculations, on the chances of what may turn up.

HOW TO SEASON LUMBER.

The *Journal of Commerce* says:—This is a subject of more than ordinary interest to all lumbermen and manufacturers just now on account of the constantly increasing demand for lumber. With but few exceptions either in Canada or the United States lumbermen have all exceeded their previous cut, and still the demand keeps pace with the production. This demand is kept up by the rapid development of the country, with which it is found difficult to keep pace. These rapid changes induce entirely new methods of business, and lumbermen realize that the old system of piling their lumber in their yards from one to two years, waiting for the wind, sun and rain to make the product marketable, is unprofitable and behind the times. They are consequently introducing the modern dry kiln and planing machines. Long shipments by rail are impossible unless the product is shorn of all superfluous weight. Shavings, edgings and trimmings can be more profitably used as fuel at the saw mill than by adding their weight to a consignment of lumber destined to a distant dealer, who will not pay as much for the rough as he would for the dressed. The same is equally true of the moisture contained in green or half dry lumber. No lumbermen can make it profitable to pay freight on water, and every thousand feet of green pine contains over 1,000 pounds of moisture that can easily be expelled by a few days' treatment in a modern dry kiln, which will leave the lumber in better condition than if seasoned in the open air, and much more acceptable to the customer, for the new process seasons the lumber thoroughly and without injury, which is not always the case with weather seasoning. Lumbermen and manufacturers unacquainted with the new dryer will probably doubt the practicability of drying lumber on a large scale for shipping purposes. It is a fact, however, and there are at least two hundred lumbermen in the United States that are taking their lumber green from the saw and drying with great profit for shipping and manufacturing purposes, and the system is being rapidly adopted by prominent companies in the Dominion. The kilns are usually placed in such a position that the lumber can be loaded on the cars of the kiln at the saws, and pass from them through the dry kiln and on to the dressing mill without further handling. Steam saw mills can use their exhaust steam as a heating medium, and mills driven by water power can have a boiler put in at small expense. The results attained through the medium of these dry kilns is astonishing. Elsewhere will be found the amount saved in freight, which is a large item on long shipments. Add to this the increased value of the lumber, as well as interest and insurance saved, and it will be found a first-class investment On another page of this Journal will be found a cut illustrating these modern dryers, of which Mr. A. F. Barron of Montreal is patentee and builder for the Dominion.

THE WESTERN LOG CUT.

A dispatch from Brainerd, Minn., May 29th, says: By the returns of interested parties from a tour of inspection of the timber wilderness on the Upper Mississippi to-day the first authoritative reports are received of the cut of the winter and the progress of the drive. These make the following summary; The logs of eight out twelve large operators, are hung up under various circumstances, and cannot get out without great rains: some not even then, as it is so remote, and the men have given up and gone home. The winter's cut of Blake Bros., of Minneapolis, 27,000,000, is among these, being hung up in Balsom Brook, and in Prairie River. The aggregate of logs thus hung up is 25,000,000 feet, which is one-fourth of the average crop which comes past Brainerd in the Mississippi annually, The rafts hung up or in jams in the tributaries are estimated at 80 miles,

which includes, however, the Canadian logs in Big Fork River, which flows northward. In one Mississippi tributary, Swan River, there is a jam of 35 miles with 40,000,000 logs in it, which cannot get through without rain. It is also found, after all, that the cut was larger last winter than has been generally believed, but less is likely to get to market, so there is really a shortage. The whole region is found to be full of cruisers spotting fat lands for the next land sale at St Cloud in August.—*Lumberman's Gazette.*

THE CALIFORNIAN SUPPLY.

The State Mineralogist of the state of California estimates the quantity of lumber cut each year in California and shipped eastward at 70,000,000 feet, Cord wood is sent in about an equal quantity. The heaviest drafts on the mountain timber have been for Nevada use. The Comstock lode alone required 1,000,000,000 feet. Notwithstanding this cutting, the replenishing goes on, and no fears are felt for a lack. The Truckee river and the region around Lake Tahoe have been resorted to most for timber of any regions of the state, but they represent, it is stated, but a small fraction of the timber bearing surface of the mountains—say 20,000 acres, out of a total of several million acres of the main summit of the Sierra Nevada range. Estimates claim that there is timber enough on the eastern slope of the mountains, between Hope Valley and Beckwith Pass, to supply Utah and Nevada for half a century, without taking into account the reproduction that is in progress.—*Lumberman's Gazette.*

Forest Fires.

The *Lumberman's Gazette* of Bay City, Michigan, in its issue of June 6th, says :—In our last issue we alluded to the great danger from forest fires, because of the inflammable material left in the woods where lumber operations had been conducted, and urged extra caution and vigilance on the part of the land lookers, hunters and settlers alike in order to avoid a repetition of the terrible disaster of 1880. Since then we have heard of fires raging in the woods quite extensively in Iosco, Roscommon and other counties, and a considerable amount of destruction of property resulting. The soaking rain of Sunday, however, if it reach that far north, has probably settled for the present all danger in that direction. But the necessity for extra precaution will be quite as urgent again in a very short time, and the vigilance should not be in the least relaxed. Another week of hot weather and a cloudless sky will again make the danger as apparent as ever. Let the suffering and devastation of 1880 be a warning to every person who has occasion to use a fire in the woods during the summer months, in order to avoid a like casualty.

Montreal Notes.

The Montreal *Gazette* of June 8th, says :—The local trade in lumber has shown an improvement upon that of the week previous, and prices at the yards remain about the same. A fair number of orders have been filled ex-barge, arrivals are assuming larger proportions, and the season's supply of both hard and soft woods will no doubt be in excess of that of last year. As regards the export trade, there is very little doing yet on River Plate account. Deals, on the other hand, have been shipped liberally to U. K. ports, nearly every steamer taking out her complement. Further engagements have been made for deals at 67s. 6d. to Bristol Channel, some owners asking 70s., but we understand that 67s. 6d. is the fixed rate at present.

Southern Lumber.

The shipments of lumber by rail from southern points to the west and east is assuming large proportions. Railroads which penetrate the pine regions of Georgia have learned that the transportation of lumber brings solid and substantial returns, and what was at first looked upon as a secondary business, to supplement the gross returns on more valuable traffic, is now considered too valuable to be hampered with excessive freight charges. In fact, the solid roads in the state are those which handle the bulk of the timber and lumber. Following in the wake of the roads of the Northwest they offer every inducement and facility to the manufacturer to to get his patronage. This is the only course that our roads can constantly pursue, as the lumber trade cannot expand unless the markets are placed within easy reach. To encumber it at the outset is a pernicious policy. This is a lesson which some of the roads in the south may learn in time ; but the sooner they learn it the better.—*New Orleans American Lumberman.*

A FURIOUS GALE.

ST. JOHN'S, Que., June 6.—This section of the country was this evening visited by one of the fiercest storms seen in years. About 3.45 a terrible rain from the south-west set in, the wind blowing a gale. Shortly after, hailstones as large as marbles began to fall, and continued for several minutes. In an incredibly short time the torrent flooded the streets, the drains being insufficient to carry off the extraordinary amount of water. Several cellers under the principal stores on Richelieu street were flooded, causing much damage. The streets in several places were completely blocked by trees which had stood the storms of thirty and forty years, but to-day succumbed. Piles of lumber were blown from the wharves into the river, and the lumber yards lost heavily, the lumber being blown hundreds of feet and broken to atoms. Fences were blown over in all directions. The gable end of the brick brewery and the iron roof of Mrs. Dewar's store and dwelling were blown off. The rain poured through the wooden covering of the latter in torrents.

The Kennebec Output.

SKOWHEGAN, Me., May 29.—The figures now in show the total cut of logs on the Kennebec river the past winter to be 120,000,000 feet; there being on Moose river 43,000,000 feet ; on the Dead river, 40,000,000 ; and on the Moosehead lake region 37,000,000. To the above must be added at least 5,500,000 feet of old logs left over on the Moose river. The main river from Moosehead lake is driven by Milliken & Sturger at 34 cents per thousand ; last year, driven by the corporation, it cost about 49 cents. The driving on Moose river within corporation limits, has also been let by the thousand, the price from the bridge to Moose Lake being thirty-five cents per thousand. Heavy rains recently entirely changed the out look for the stream drives, and, with one or two exceptions, they will all get out. On the upper waters of Moose river they have had the best of success, making the cleanest drive that has been known for a number of years.—*Northwestern Lumberman.*

Important to Lumber Shippers.

A joint circular signed by the general freight agents of the Ontario roads has been issued, giving special direction about the shipment of lumber. All cars may be loaded to their full capacity at carload rates, any excess over that up to 2,000 pounds will be charged pro rata, but if the excess be over 2,000 pounds the whole of the overload will be charged for at fourth-class freight rates, and the companies reserve the right to remove the overweight at the expense of the owner. Forty-eight hours will be allowed in which to unload cars after their arrival in yards, after which time consignees will be required to pay demurrage charges. When cars are ordered to the Toronto esplanade twenty-four hours will be allowed from the time the car is placed on the switch, and as there is no room on the esplanade the consignees will be required to unload from yard sidings within forty-eight hours after arrival.

Causes of Fires.

The census investigation showed that in Massachusetts, during the year 1880, 52 forest fires were set by sparks from locomotives ; that 40 spread from carelessly burned brush heaps ; that hunters caused 37 ; that 19 careless smokers dropped their lighted cigars or burning ashes from their pipes, and so caused disastrous conflagrations. In three instances the origin of forest fires is ascribed to the burning of charcoal, and in only eight cases to malice. It appears, then, that the railroads are responsible for the greatest number of these fires, and that the remainder may be generally traced to sheer carelessness. As a first step toward checking this evil, railroad corporations should be compelled to provide their locomotives with spark consumers. Another act is needed to compel the collection and burning during the winter in which the trees are cut of every part of them not carried away.—*N. Y. Lumber Trade Review.*

Scarcity of Water.

The *Northwestern Lumberman* says :—The news from Maine is not of an encouraging kind. The scarcity of water in the streams used for logging is very low, and it is feared that many logs will be hung up. A gentleman from that state, who is well posted in the products, estimates that the log crop of the Penobscot would reach about 150,000,000, the Kennebec 120,000,000, Aroostook county 70,000,000, the Machias Basin about 30,000,000, and the cut of the entire state nearly 600,000,000 feet. There is now a fear among the logging men that the drives will not allow of bringing the output to the mills and coast. The lumbermen of Maine would welcome heavy showers even if they have to come with heavy thunder and a sprinkling of cyclones. The work of banking the logs during the past winter has employed something like 10,000 men and 3,000 horses and oxen.

THE *Mail* of June 12th, says :—Rates are reported as being firmer at this port, with a slight upward tendency. The lumber figure of $1 to Lake Ontario ports was so very low that vessels hardly cared to take in such cargo, but as there is a slightly increased demand for vessels to carry this class of freight, it may be that in a day or so a raise in the figures towards the opening price of $1.25 will be reached.

DODGE & CO.

Pine & Hardwood Lumber

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1,000 Feet FLAT IRON

FOR TRACK.

1½ x ¾—Punched, ready for use. For sale cheap.

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WATER POWER

TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

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—FOR—

FOREIGN COUNTRIES.

Young, Single or Married, Energetic, Sober, Self-reliant Men, thoroughly accustomed to manage and run on Direct Action Saw Mills. Two wanted immediately ; three years engagement ; good wages, expenses and board. Write stating what mills have run, references and wages wanted.

WATEROUS ENGINE WORKS Co.

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ROCK ELM WANTED.

A Few Car Loads of good ROCK ELM, cut into 1¼, 2, 2½ and 3 inches thick, 12ft. length prefered.

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Lumber Dealers,
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A RARE CHANCE!

Valuable Steam Saw-Mill

FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings through piling Grounds connected with main line of Canada Pacific Railway. The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waba Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, Seigneurs Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

ALEX. FLECK,
6L11 Ottawa.

SAW MILLS

AND

TIMBER LIMITS

WITH

Logs, Lumber, Store Goods, &c

FOR SALE

In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

Canada Pacific Railway now running through part of the property.

For full particulars address :—

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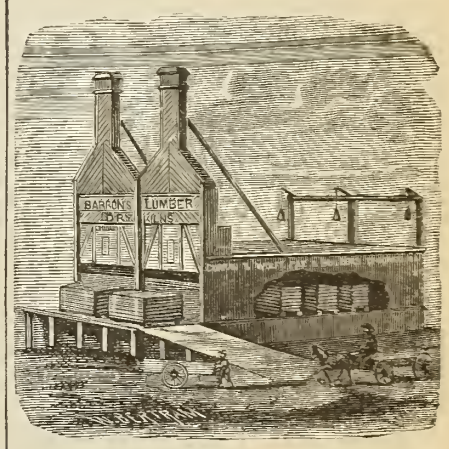

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Send for descriptive Pamphlet containing list of parties using this Dry Kiln in the United States.

Dryers built and in working order by the following Companies :

James Shearer, Montreal ; James Crossen, (car builder), Cobourg, Ont. ; Canada Pacific R.R., Perth, Ont.; Kingston Car Works, Kingston, Ont.; Pike & Richardson (Cooperage Co.), Chatham, Ont ; and in course of construction, Grand Trunk R.R., London, Ont.; Steinhoff, Schnoor & Co,, Staves and Heading, Wallaceburg, Ont, 12L12

THE PLAYED OUT DELAWARE.

A correspondent writing from Deposit N.Y., to the New York *Times* says :—"The lumber business has been the mainstay of the Delaware and its tributary valleys for 120 years, but the onslaughts of the woodmen have been so persistent and fierce, especially during the past quarter of a century, that it is believed the present season will see the almost total exhaustion of the lumber supply. The Delaware lumber region embraces a large portion of Sullivan and Delaware counties, N.Y., and Pike and Wayne counties, Penn. Ten years ago the average quantity of lumber sent to market by rafts on the Delaware alone amounted to 100,000,000 feet, nine-tenths of which was hemlock. In 1870 Wayne County's supply of lumber was over that amount, 30,000,000 feet of which was shipped by rail, and the remainder by water. The spring freshet of the present year has been an unusually favourable one for the running of lumber, but the quantity rafted and run from all the regions has not exceeded 20.000,000 feet. Of this amount about one-third has been forwarded by one operator, William Holbert, of Equinunk, Wayne county. The rest was cut principally in Sullivan and Delawaro counties. The rail shipments will amount to about one-half the above amount, and are made over the Erie, Delaware and Lackawana, and New York & Oswego Midland railroads. To secure even this comparatively small supply the country has been scoured from far and near. Pine, which was once the staple product of the Delaware region, was exhausted many years ago. When the first settlers came into the valley the whole region was a dense pine wilderness, and for 70 years the hemlock was left untouched, not being considered of any value. Lumbermen still in the business hereabout remember when the very best quality of pine was manufactured and rafted to the Philadelphia markets and disposed of at $9 per thousand, while now it must be imported for home consumption and six times that price paid for it. In those days there were no circular saw-mills, but only primitive upright mills here and there in the forest. The first circular mill was erected in the Delaware valley, about 35 years ago, and others were quickly introduced until there were scores of them at work, some of them capable of manufacturing 50,000 feet of lumber a day each. The result has been the rapid exhaustion of the forests, until there is but a small area of the original timber standing, and that is in the hands of a very few individual operators.

"The work of cutting away the timber on the headwaters of the Delaware, on the West Brauch, was prosecuted with such vigor that it has been many years since rafts have been run from above Walton, and the number run from that point has been very small. The East Branch drains what was ten years ago the almost primitive wilderness of Sullivan and Delaware counties, but which is now a field of stumps, or tracts of second rate timber. The work of exhaustion has not been allowed a day's cessatiou, although during the past 10 years, with the exception of 1881-2, the price obtained for hemlock was barely sufficient to cover the cost of production. This seemingly suicidal policy on the part of operators, they claim, was to no small extent forced upon them by the fact that the bark on immense tracts of timber land was purchased by tanners, who had the privilege of felling the trees and peeling the bark, which they did as they needed it. The timber onee felled and peeled, it was necessary for the lumbermen to utilize it, as a year's lying in the woods would decrease its value. The destruction of the hemlock forests has also affeeted the tannery interest, so that many of the largest establishments of the kind in this region have been abandoned for want of bark. A few year's ago Wayne county was the second largest leather produeing county in the Union, and had the largest tannery then in the world.

"When the lumber business was at its height in the Delaware region not less than 10,000 persons were employed as choppers, sawyers, teamsters and raftsmen, and most of the towns and villages owed their support, if not their existence, to the industry. None even one-third of that number are now required to carry on the business, aud many settlements are almost deserted. Fortunately, the land once occupied by the forest is capable of being turned into the finest of grazing farms, and it is being utilized by those who can no longer depend on the lumber for support."

SAW MILLS OF CANADA.

The census enumerators have returned 5,390 saw mills in operation in 1881, the location by Provinces being as follows :—Ontario 1,761, Quebec, 1,729, Nova Scotia 1,190, New Brunswick 478, P. E. Island 165, Manitoba 37, British Columbia, 27, the Territories 3.

The hands employed were as follows :—In Ontario 16,846, of whom 69 were women and 8 girls under ten years. In Quebec 12,461 hands, of whom 37 were women, and eight girls. In New Brunswick 7,175, of whom 20 were women and eight girls. In Nova Scotia, 4,160 hands, of whom 34 were women. In P. E. Island 419, British Columbia 404, and the Territories 44.

The following is the statement of the annual wages, value of raw material and value of the products of these saw mills, by Provinces :

	Yearly wages.	*Raw material.*	*Products.*
Ontario	$3,581,225	8,985,797	16,629,075
Quebec	2,287,191	5,101,884	10,542,649
N. Brunswick.	1,243,628	4,355,735	6 532,826
Nova Scotia..	549,480	1,446,858	3,094,137
Manitoba	208,190	513,158	885,173
B. Columbia..	202,420	223,961	550,321
P. E. Island..	58,262	127,194	240,153
Territories ...	16,600	43,802	95,318
Grand total.	$8,146,996	20,798,389	38,569,652

Shingle making is not included in this table —the Provinces standing as follows in the product of the shingle mills :—Ontario $454,803, New Brunswick $128.714, Quebec $98,130, Nova Scotia $69,344, P. E. Island 10,406, British Columbia $5,597. The art of shingle making was either not understood or remained uncultivated in Manitoba and the Northwest up to 1881. Doubtless in the manufacture of lumber of all descriptions great strides have since been taken in that quarter.—*Montreal Herald.*

PROTECTING THE TIMBER.

Nothing could be more gratifying to those gentlemen who have labored so assiduously for years for forest protection and culture, than the efforts which are being made in the different states in behalf of their favorite theory, the practicability of which is doubtless to be attested within the next decade. The drift of public sentiment is getting to be decidedly in favor of the protection of the timber of the country, and also in favor of forest culture, in order to replace as much as possible that of which the country is being denuded to such a serious extent, and in many cases by such lamentable methods. Our national and state legislators also are becoming interested in the subject to an appreciable degree. But the subject is one of such vastness and magnitude, the returns to be derived pecuniarily, appearing so far in the dim vista of the future, the task of such herculean dimensions, the sentiment of such slow growth, because of seeming impracticability and almost insuperable obstacles, that nothing short of unbounded faith, indomitable will, unmeasured perserverance, courage, determination and zeal, would have continued the work in the face of such opposition as has been encountered by the advocates of this measure, both in the United States and the Dominion of Canada. Indications, however, point unmistakeably to the fact that their zealous and unselfish efforts are in the not very distant future to be rewarded by the highest and most gratifying of all remuneration,—success. The Canadian government, as well as the legislatures of several states, have already by favorable legislation inaugurated practical measures in behalf of both forest protection and culture, which are already prolific with such grand results, as must be in the highest degree satisfactory to those gentlemen who, through the press and forestry congresses, have been instrumeutal in inducing the legislation referred to. The Minnesota legislature has taken an advance position on this question and passed two bills, the result of which will be watched with exceeding interest, as they embrace the protection of the present standing timber, and forest culture as well. A synopsis of these two measures recently appeared in the *Lumber World*. One provides that every person who shall plant prairie land with any kind of forest trees, except black locust, and keep them in a thrifty, growing condition for the period of six years, shall receive three dollars per year for each acre of grove so planted. Persons planting forest trees along the public highway will be paid two dollars annually for each half mile so planted. Not less than 2,700 trees to the acre must be planted, of which at least 1,800 must be maintained in a healthy, growing condition, during the first two years after planting, and at least nine hundred must survive the whole period of six years. Trees along the highway must be planted not more than eight feet apart, and maintained in a healthy, growing condition for four years. The second act appropriates five thousand dollars to be paid to the Minnesota State Forestry Association to be by them expended in the promotion and encouragement of tree planting in Minnesota, by means of distributing a manual of directions for planting and cultivating forests, procuring lectures and addresses on the subject by persons skilled in that science, and disseminating the same through the public press ; collecting information on the best methods of forest culture from persons in the state who have been successful in the same ; by experimental cultivation of varieties of forest trees which are supposed to be adapted to this climate, or by procuring and distributing seeds and cuttings for the same, and generally to aid and encourage tree planting by any other means which they may think advisable. A portion of the money may be expended in measures for the protection of the forests already growing in the state, by publishing information as to the best mannor of preventing forest fires, and otherwise protecting them, with directions for the proper thinning, replanting, etc., so as to produce systematic care of the woodlands of the state and their profitable use.—*Lumberman's Gazette.*

IMPORTANT SALE OF LUMBER.

The Montreal *Gazette* of May 26, says :—The auction sale of lumber held yesterday morning for account of Messrs. Henderson Bros., who have to remove from their yard on William street in consequence of the Dominion Government having decided to build new basins on the Lachine Canal—and are now calling for tenders for the same,—drew a large audience, most of the buyers being outsiders. The sale was conducted by Mr. William H. Arnton in a remarkably ablo manner, not a single dispute having occurred during the whole sale, which lasted from ten o'clock (10 a. m.) until half-past six o'clock in the evening (6.30 p. m.), when it was adjourned until next week, due notice of which will appear in the papers, The following are the prices obtained, a large number of lots of each having been sold ; the prices, though not high, are considered fair. Every lot put up was sold without any reserve. The total amount of the sale will foot up about $40,000.

PINE.—3 inch pine, 14 to 15 feet, at $9 per M board measure ; 1½ iuch piue, 14 to 16 ft, at $17 per M board measure ; 3x4 inch pine, at $12.50 per M board measure ; 2 inch pino, plank, at $16 per M board measure ; 1 inch pine, plank, at $15 per M board measure ; 2 inch pine, battens, at $9 per M board measure ; 3 inch pine, sidings, at $9.50 per M board measure ; 1½ inch pine, extra, at $24 per M board measure ; 1¼ in. pine, extra, at $18 per M board measure ; 3 in. pine, wide, at $16.50 per M board measure ; 3x4 inch pine, scantling, at 12c. each ; 2 inch pine, prepared, at $14 per M board measure ; 1 inch pine, prepared, at $24.50 per M board measure ; 3x4 inch pine, at $20 per M board measure ; 3x3 inch pine, at $15 per M board measure ; 1 inch pine, prepared, at $18 per M board measure ; 2 inch pine, extra, at $23 per M board measure ; 1½ inch pine, extra, at $31 per M board measure.

SPRUCE.—2 inch spruce, prepared, at $20 per M board measure ; 1¼ inch spruce, at $9 per M board measure ; 1¼ inch spruce, prepared, at $13 per M board measure ; 1 inch spruce, at $11 ; 1 inch spruce, prepared, at $5.75 per 100 pieces ; 2 inch spruee, plank, at $11.50 per M board measure ; 3 inch spruce (11 inch wide) at $9 do.

Hemlock, tamarac, basswood, cottonwood and red pine—2 inch hemlock, $8 per M feet, board measure ; 1 inch hemlock, $7 per M feet, board measure ; 3 inch tamarac, $15.25 per M feet, board measure ; 1 inch basswood, $15 per M feet, board measure ; 3 inch cottonwood, $7 per M feet board measure ; 6 inch basswood, $8.75 per M feet, board measure ; 1¼ inch red pine, $13.75 per M feet, board measure ; 2 inch red pine, $14.25 per M feet, board measure ; 1 inch red pine, $14 per M feet, board measure.

Hard Woods—Black walnut, 1 inch, $45 per M feet, board measure ; hard maple. 2 inch, $24 per M feet, board measure ; birch. 2 inch, $16 per M feet board measure ; maple. 3 inch $23 per M feet, board measure ; maple. 3x1 in. $23 per M feet, board measure ; hardwood, 3x4 inch, $20.50 per M feet board measure ; hardwood, 2 inch, $15 per M feet, board measure ; hardwood, scantling, $20.50 per M feet, board measure ; ash, 1 inch, $12.50 per M feet, board measure ; oak, 6 inch, $16 per M feet, board measure ; oak, assorted, $20 per M feet, board measure ; ash, 2 inch, $13 per M feet. board measure ; oak and ash, 1 inch, $15 per M feet. board measure ; butternut, 1 inch, $18 per M feet, board measure ; cherry, 1 inch, $19 per M feet, board measure ; oak, 2 inch, $28 per M feet, board measure ; oak, 2½ inch, $28.50 per M feet board measure.

THE Lindsay *Warder* of June 1, says :—The Gilmour drive is already in Pigeon Lake. It contains 18,000 logs and 600 pieces of square timber, out on the Galway limits and brought down Negey's creek. These limits have been worked for a number of years, and appear to be inexhaustible.

THE Ottawa *Free Press* says that Mr. E. B. Eddy seems determined to keep in advance of all competitors. To make room for the large product of his new mills he has added the extensive grounds surrounding Currier & Batson's old mill to his piling ground, and has a tramway running direct from the mills to the wharves on the east side. This is the finest piling ground around Ottawa.

LIVRPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on April 30th, 1882 aud 1883, and also the Consumption for the month of April, 1882 and 1883 :—

	Stock, April 30th. 1883.	*Stock, April 30th. 1882.*	*Consumption for the month of April 1883.*	*Consumption for the month of April 1882.*
Quebec Square Pine	123,000 ft.	103,000 ft.	56,000 ft.	68,000 ft.
" Waney Board	124,000 "	167,000 "		
St. John Pine	8,000 "	3,000 "	10,000 "	7,000 "
Other Ports Pine	40,000 "	28,000 "	2,000 "	1,000 "
Red Pine	20,000 "	22,000 "	21,000 "	5,000 "
Pitch Pine, hewn	615,000 "	611,000 "	115,000 "	254,000 "
" Sawn	552,000 "	451,000 "	227,000 "	160,000 "
Planks	61,000 "	70,000 "	23,000 "	27,000 "
Dantzig, &c., Fir	25,000 "	103,000 "	— "	88,000 "
Sweden and Norway Fir	12,000 "	8,000 "	7,000 "	—
Oak, Canadian	171,000 "	243,000 "	30,000 "	21,000 "
" Planks	163,000 "	95,000 "	56,000 "	42,000 "
" Baltic	20,000 "	60,000 "	1,000 "	— "
Elm	27,000 "	37,000 "	2,000 "	8,000 "
Ash	— "	13,000 "	2,000 "	1,000 "
Birch	46,000 "	42,000 "	23,000 "	39,000 "
East India Teak	67,000 "	83,000 "	14,000 "	13,000 "
Greenheart	138,000 "	28,000 "	8,000 "	6,000 "
N. B. & N. S. Spruce Deals	9,813 stds.	7,632 stds.	3,076 stds.	3,012 stds
" Pine	870 "	305 "		
Quebec Pine & Spruce Deals	5,136 "	4,769 "	1,071 "	1,079 "
Baltic Deals	3,547 "	2,209 "	318 "	166 "
" Boards	312 "	60 "	28 "	— "
" Boards Flooring	7,487 "	4,860 "	1,481 "	1,333 "

Chips.

THE *Monetary Times* has a special supplement devoted to "The paper trade of Canada." Among its valuable information are details showing the great importance and the rapid growth of the manufacture of wood pulp.

A DESPATCH from Duluth of May 26, says :—The schooner Dot has arrived from Midland, Ontario, with 800,000 feet of lumber for Winnipeg. She reports lots of ice near Sault Ste. Marie. She was fourteen days coming.

THE Belleville *Intelligencer* says a quantity of timber in Sidney has been purchased by Thomas Buck and is being brought here by wagons, each one of which used carries 126 feet. The timber will be rafted here and will make about three drams.

THE *Northwestern Lumberman* says :—Some very heavy square timber, for the Canadian market, that was hung up on the St. Regis river, in northern New York, for an entire year, were latterly floated down to the St. Lawrence on the spring rise.

IT is proposed to have an International Forestry Exhibition in Edinburgh next year. The Highland and Agricultural Society are to co-operate, and have subscribed £100 to the guarantee fund. Canada should be well represented at the Exhibition.

THE largest specimen of wood that has thus far been received by the Central Park Museum, New York, is a section of white ash, which is 46 inches in diameter, and 82 years old. A section of sycamore, or buttonwood, is 42 inches in diameter, and 71 years old.

THE Oakland Manufacturing Company, Gardiner, Me., consumes annually 1,500,000 feet of hardwood, and 2,000,000 feet of spruce and pine in the manufacture of gutters, moldings, broom handles, spring bed stock, slats, etc. During a busy time 40 hands are employed.

A TRIAL was recently made at Williamsport, Pa., of gas made from wood. It gives a soft light, and is about 30 per cent. cheaper than ordinary gas. Any kind of wood except oak, can be used in making the gas, which is manufactured by a portable and easily managed apparatus.

THE Plevna correspondent of the Napanee *Beaver* says :—Mr. George Hick's circular saw mill, a few miles up the creek, is now in operation. The erection of the mill and machinery is entirely the work of Mr. Hicks and his sons, and the building reflects great credit on their workmanship.

A KINGSTON correspondent under date June 1st, says :—Wm. McRossie has received an order to ship 1,500,000 feet of pine timber to Syracuse and Albany. The lumber will be brought in by the Kingston & Pembroke Railway and shipped *via* Oswego. The rate across the lake is 85c.

AN Ottawa despatch of June 1, says :—Lumber shipping continues brisk. All the American boats are now loading at the advanced rates. It is thought that there will be an unusually large cut of deals for the English market this season. Several English buyers are at present in the city. Prices remain unchanged.

THE Winnipeg *Commercial* of May 22, says : The demand for lumber during the week has been a little more lively, but otherwise the trade remains in the same condition as last week. Prices as formerly continue to be fixed pretty much according to arrangement between the contracting parties. Money is reported to be very close.

DESTRUCTION is threatening the fine pineries of Lincoln county, Arkansas, in the shape of a peculiar caterpillar, which feeds on the foliage, and are in such huge numbers as to strip the trees entirely of their needles, giving them the appearance of being dead. This being the first instance known of any kind of worm that would feed on the foliage of the pines, speculation is rife as to the result, some maintaining that it will kill the trees, while others think they will not be materially injured. Those owning fine pineries are quite interested on the subject, and fear the destruction of their trees. The worm drops to the ground after having stripped the trees, and dies where it falls, and neither hog nor fowl will eat them.

AN Indiana lumberman asks, what will prevent heavy ash and oak from checking? The ends of hardwood logs for export are covered with a coat of paint to prevent them from checking, and the same treatment would be applicable to logs or timber not for export. To prevent the sides of plank from checking they should be properly piled and protected from the rays of the sun.

A DESPATCH from Eau Claire, Wis., dated May 27th, says :—Up to date the large amount of 120,000,000 feet of logs have been rated at the Beef Slough works, near the mouth of the Chippewa, and towed by raft boats to Dubuque, Iowa, Burlington, Iowa, Clinton, St. Louis, and other prominent places on the Mississippi. There remains in the works 60,000,000 feet of unrafted logs, and a force of 500 men are engaged in rafting and brailing at present.

A LARGE elm tree growing at Norwich, Conn., is over 70 years old, and the limbs are 30 feet from the ground. It stands alongside a house, the chimney of which has been swept away by the overhanging branches, while the tree has raised and moved the house one foot by the force of its growth. A similar instance has occurred at Nassau, New Providence, one of the Bahama islands. A cotton silk tree growing there has obtained such mammoth proportions that it has actually lifted a large government building.

THE *Monetary Times* says :—The quantity of timber imported into Great Britain for the first four months of this year compares as under with that of the same period last year :

4 Months.	*Hewn Timber.*	*Sawn Lumber.*
1883.....	408,733 loads.	376,466 loads.
1882.....	460,566 "	452,210 "

There is thus a decrease of between fourteen and fifteen per cent. in the quantity imported this year. The decline was most marked in April, being over twenty-five per cent.

To remove the unpleasant taste which is frequently observable from new wooden vessels is a thing difficult of accomplishment. The *Brewing World* says that the simplest plan, and one that will succeed in most cases, is to scald them thoroughly several times in boiling water, then dissolve some pearl-ash or soda in lukewarm water, adding a little lime to it, and wash the inside of the vessels well in the solution. Afterward scald them several times thoroughly as before.

IF the block pavement is carefully swept every day, it does not need much watering, yet it is the practice of some of the drivers to put as much water on the clean block surface as used to be found necessary before the blocks were laid. It should be needless to remark that when the dust is gathered by the new patent process, it is with the intention that the dusting service shall nearly suffice. To deluge the wooden blocks with water in addition, is not only unnecessary, but injurious.

THE *Timber Trades Journal* of May 19, under the head of Glasgow, says :—As regards Quebec goods the trade apparently are waiting for fresh importations, when it is to be expected that larger companies will be attracted and give prices a decided start upwards. Meantime the market is not buoyant. Recent deliveries of deals from Yorkhill yards here show little difference in quantity compared with same time last year. The number of deals delivered last month was 68,826 pcs., and in April, 1882, 64,353 pcs. Since the beginning of the present month deliveries have been lighter than usual.

THE *Timber Trades Journal* of May 19, says : More birchwood is being imported here this season than we have noticed in previous years. Messrs. Forslind & Co., a firm who have contributed much to the extension of this trade, are not only importers, but in many instances the shippers as well, cutting down the wood on the other side, preparing, shipping, and finding a sale for it here upon it arrival ; most of it is being sent into Lancashire and Derbyshire, where it is put to suitable use by the cloggers, brushmakers, and bobbin manufacturers of these counties. The arrivals of the past week have been much fewer than usual, and their absence has caused the quietness occasioned by the holidays to be all the more apparent ; the only imports consist of two or three cargoes of props and a steamer from Pillau with sleepers.

THE Morris correspondent of the Winnipeg *Commercial* says :—The saw mill at Morris has been overhauled and is now in readiness to commence the season's operations. Large quantities of lumber are being imported into Morris this spring, from which it appears that building operations are to be carried on briskly during the summer.

THE Chicago *Tribune* says :—Lumber vessels are experiencing considerable trouble in entering and leaving east-shore ports, occasioned by the shallow condition of the harbors. At White Lake the water is only nine feet in depth, and the captain of a steam barge arriving here yesterday, reports having grounded several times when leaving Montague. The captain of the propeller Lawrence also states that he has encountered difficulty at Charlevoix and Frankfort on account of the bottom being too near the surface.

IT is mentioned, in advocating the white willow as a profitable tree for planting, that one is growing at Stockbridge, Mass., which measures 22 feet in circumference four feet from the ground, while its branches extend 50 feet. In England the willow often grows to a height of 50 to 60 feet in 20 years. There it is much esteemed, because the wood is light, very tough, takes a good finish, and will bear more hard knocks than any other wood. It is used for floats to steamer paddle-wheels, brake blocks on cars, cricket bats, turning purposes, planking, vessel furniture, ox yokes, wooden legs and shoe lasts.

THE *Northwestern Lumberman* says :—Prospects for clean drives are growing brighter every day. Copious rains have followed the dry weather in some sections, and many of the hung up logs have started down stream. In eastern Michigan the improvement is very marked. On a few of the Wisconsin and Minnesota streams they do not expect to make much headway until the June rains come, but it is possible that the rain of yesterday (Wednesday), that had the appearance of being general, reached them. There is not, at present, any indications that the drives, on the whole, will not be very successful.

THE Wyevale correspondent of the Barrie *Northern Advance* says :—Times are busy about our little village. The mills are all running full blast. Mr. Belding's mill has run for three years, winter and summer without cessation. During last winter Mr. Belding supplied the Canada Southern Railway with about 500,000 feet of bill timber, most of it 45 feet long. He has also shipped a quantity of lumber from Penetanguishene to Prince Arthur's Landing, and as soon as the vessel returns will ship another cargo. It is his intention to run steady while the limits last. Mr. Dyment's new mill is now running under the management of Hogan Bros.

THE East Templeton correspondent of the Ottawa *Free Press* says :—The hemlock bark concern is in full blast now, having over 100 men busy in the woods, and anticipate getting out 1,000 cords at least, and the season for stripping it appears only lasts about six weeks, hence they will have to look lively. The men are all camped out and are a fine lot of quiet fellows, happy at their avocation. The last drive this season is Messrs. Edwards', of Rockland. They are still in the lakes, but are pushing along rapidly. The quantity of lumber brought down the Blanche is larger this year than usual. The quality of the logs is very good but small in the average.

THE London *Timber Trades Journal* says :—Twenty five vessels of all sorts, carrying timber goods, must be counted as a very moderate week's arrival for the month of May. Seventeen were steamers, and several of these brought only small instalments of fancy woods, adding but a trifle to the stocks in hand, a cargo or two of flooring, with a sufficiency of sleepers, staves, and lathwood, and the customary supply of doors and other joinery, by the regular liners from New York and Gothenburg. Teak, mahogany, and pitch pine also, each contributed a cargo or two, and the rest were mostly vessels laden with building wood, including one cargo from St. John, N. B., apparently on Liverpool account. But at all events the London supply for the week cannot be in any manner considered excessive.

SHORTAGE OF LOGS.

Every few days the announcement is made that some of the mills on the rivers are compelled to cease operations for the want of logs. This is the fulfillment of our predictions made several weeks ago, and which was as inevitable at that time as at the present. As the season progresses the announcement of stoppages will be even more familiar than at present, and the inevitable result must be a material reduction in production because of the shortage of logs. The 300,000,000 shortage in the Tittabawassee boom at the close of last season, with the large number of logs which are being held back by low water in the tributary streams, cannot but have their effect on the result of the season's cut, and those valley papers which have been to the trouble of figuring up a cut on the Saginaw river greater than that of last year, without any shadow of foundation for such an estimate, and which have not the honesty even now to retract the statement, and in a measure repair the injury, which their falsehoods or ignorance is producing, are deserving of only the utmost contempt, and of course, while they maintain silence, it cannot be expected that their aping copyrighted reprint at Chicago will do any better than they do themselves.—*Lumberman's Gazette.*

Suggested by a Wasp Nest.

A man named Keller is alleged to have been the first discoverer of the process of wood grinding for pulp. The peculiarity of the structure of the wasp's nest suggested the idea that possibly wood could be substituted for rags in making paper. He experimented with saw-dust to no purpose. Wet grinding next suggested itself. This idea was brought into service by means of an old grindstone, and wood pulp was the result. He made a sheet of paper in four hours by straining the pulp through a cloth and leaving it pressed between the leaves of a book till dry. Keller built a rude grinding apparatus, taking no one into his confidence but his wife, and after encountering the vicissitudes which usually beset the path of an inventor, was finally possessed of a mill, which was sold for debt.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

NEVER ALLOW IT.—Never allow the bowels to remain in a torpid condition, as it leads to serious results, and ill health is sure to follow. Burdock Blood Bitters is the most perfect regulator of the bowels, and the best blood purifier known.

A WONDERFUL CHANGE.—Rev. W. E. Gifford, while pastor of M. E. Church, Bothwell, suffered from chronic dyspepsia so badly as to render his life almost a burden. Three bottles of Burdock Blood Bitters cured him.

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Unlocks all the clogged avenues of the **Bowels, Kidneys and Liver.** carrying off gradually without weakening the system, all the impurities and foul humors of the secretions ; at the same time **Correcting Acidity of the Stomach,** curing **Biliousness, Dyspepsia, Headaches, Dizziness, Heartburn, Constipation, Dryness of the Skin, Dropsy, Dimness of Vision, Jaundice. Salt Rheum, Erysipelas, Scrofula, Fluttering of the Heart, Nervousness and General Debility ;** all these and many other similar Complaints yield to the happy influence of **BURDOCK BLOOD BITTERS.**

Sample Bottles 10c ; Regular size $1.

For sale by all dealers.

T. MILBURN & CO., Proprietors, Toronto

Market Reports.

TORONTO.

From Our Own Correspondent.

JUNE 9.—Considerable lumber is still passing over our docks here, the same fleet of vessels being kept going, some of which bring return cargoes of coal, but there is no disguising the fact that the quantity of lumber to be moved over the N. & N. W. R. R. this season will not be as large as in former years, owing largely to the fact that in consequence of the late starting up of the mills this spring, a considerable portion of the total cut will not be fit to move before the close of navigation. This will be the case with regard to shipments from Port Hope and other points, as well as from this port.

The car load trade is somewhat disturbed by the combined action of the various roads in regard to excess weights, and other matters affecting the wholesale trade. Heretofore considerable lumber passing over the Midland system has found its way to the adjoining municipality of Parkdale, passing over a portion of G. T. R. R., and into the yard owned by the C. V. R. R. Co., for which service dealers have hitherto paid the sum of $2.50 per car, and for which service, although it may be said to be within the city limits *proper*, the extortionate sum of $5.00 is now demanded, and in some cases the time occupied in sending a car of lumber the three miles alluded to would be amply sufficient to take it to Liverpool, England. This state of things tends to hamper the trade, and can only results in loss to the Midland Railway Co., as in future the lumber needed for consumption in Parkdale will come over the N. & N. W. R. R., whose track passes directly through Parkdale. The gist of the whole matter is, that huge monopoly the Grand Trunk Railway Co. wishes to control or absorb all the smaller railway systems, and where they fail in this respect they place every obstruction possible in the way, but like all such attempts it must sooner or later end in mortification and failure to themselves.

Trade from the retail yards is fairly active and prices of bill lumber quite firm, in fact retailers are compelled to stand stiff on prices, being forced into that position by mill men who invariably decline to cut bill stuff unless dealers come up to their figures, and in ordor to give retailers a living profit on dimension lumber it should rule fully $1.00 per M higher from the yards. Lath continues exceedingly scarce, and former figures firmly maintained. Cull lumber is only in moderate demand owing to speculative building having nearly come to an end, which will ultimately prove a blessing to the city, even if it is a blessing in disguise.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

MONTREAL.

From Our Own Correspondent

JUNE 9.—The amount of business done so far this season is not quite so large as it was last year, and a much smaller quantity of lumber is arriving. This latter circumstance is considored a very satisfactory feature in the trade, as last season there was really a larger quautity of coarse pine, spruce and hemlock than was required; but now stocks are expected to be well worked off this summer as there is a considerable quantity of building to be done, There is a fair retail trade being done in hard woods, choice lots being still inquired for on American account. Laths are now reduced to $1.50 with considerable stock on hand; with this exception we have no changes to report. We quote prices ex yard as follows:—

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@00 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	0 00@ 1 50
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

FREIGHTS AND SHIPMENTS.

As yet there is nothing doing on South American account, but, as will be seen from the following statement, deals has been shipping in large quantities to London and Liverpool; 67s. 6d. is about the current rate of freight, although some owners are inclined to ask an advance. Shipments to London since the date of our last report have been, per SS Carmona, 10,868 pcs deals; per SS Barcelona, 10,389 pcs deals; per SS Viking, 1,539 pcs deals. To Liverpool, per SS Nepigeon, 67 std deals; per SS Oregon, 13,660 pcs deals; per SS Polynesian, 9,158 pcs deals; per SS Lake Winnipeg, 39 std deals; per SS Montreal, 8,340 pcs deals, 3,258 boards, 6,257 strips; per SS Manitoba, 46 std deals; per SS Toronto, 9,353 pcs deals and 775 boards; per SS Mississippi 4,689 pcs deals. To Hull, per Barque Polynesion, 8,043 pcs deals and 460 pcs deal ends.

CORDWOOD.

There is very little coming in either by boat or rail, and at present there are no boats at the wharf. Tamarac is scarce and what is in stock is generally short and of poor quality. The demand, however, just now is very slack. The Government are calling for tenders for the supply of wood required for the Court House to be in by the 16th inst. The market is firm and tends upwards. We quote at wharf ex cartage:

Long Maple	$ 7 00
Short "	6 50
Long Birch	6 00
Short "	5 50
Long Beech	6 00
Short "	5 00
Long Tamarack	5 25

WINNIPEG.

The *Commercial* of June 5th, says:—There has been no material improvoment in the state of this trade during the past week, and dealers are gradually settling down to the conclusion, that they have over estimated the demands of this season. Building operations are not going to be so extensive as was anticipated, and the lumber demand will be correspondingly lighter.

In its manufacturing notes the *Commercial* says:—There is no probability of the lumber mills being rushed this season as they were last summer, and the day and night run will be avoided at least for a great portion of the season. The facilities for shipping in lumber will give a good show to importers, who have already a large stock on hand, aud local manufactures like other industrial interests are liable to find out that they have slightly overestimated the trade of the season. Furniture factories are still keeping busy, but are not forced to undertake night work. Later iu the season their rush will probably be much greater, as with the location of the settlers who are now rushing into the country, there must be in a few weeks a heavy demand for furniture. Manufacturers are not disappointed with present affairs, and state that the present even flow of orders is almost as profitable as the rush of last season.

ALBANY.

The *Argus* says:—The trade during the week ending June 6th has been only fair, and does not embrace any transactions of importance. There have been no large buyers of pine in the market, and the shipments have been mostly of previous sales. A good assortment and stock of seasoned lumber is still on the yards, aud the receipts have been mostly in good order. The differenco between buyers and sellers at the mills as to the prices of this year's cut still continues, and thus far but few purchases have been made in Canada and Michigan. This is shown by the falling-off in the shipments by canal for the last ten days in May, which have been some twenty millions of feet less than those of last year. There has been a steady demand for the better kinds and qualities of hard woods, though the trade has not been large. Receipts by canal and rail keep up a full assortment of seasoned lumber on the yards. Spruce and hemlock are coming in lively, and the demand equals the supply, particularly of good boards and plank, while culls are accumulating to some extent on the yards.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, hoards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of June 9, says:—The demand while not very active is of very fair, steady proportions. Good desirable lumber keeps along at quite steady prices. Pine is moving moderately at the prices that have ruled for quite a time. Spruce is firm, with liberal orders. Hemlock boards are rather scarce and values are quite strongly held. Laths are iu brisk request. Southern pine moves slowly and the market is easy. Hardwoods are keeping along quite evenly. Desirable grades of walnut are firm. Ash, oak, cherry, and whitewood move fairly at about previous prices.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of June 9th, says:—The daily arrivals of cargoes at this port during the past week have averaged a larger number than in any previous week since the openiug of navigation. Over 250 are reported in the port list, the usual proportion stopping at the market. The greatest number reported was on last week Thursday, when 58 put in an appearance. On Wednesday of this week there were 46, and over 30 came in on each of four days, the least number, 19, arriving last week Friday.

The offerings have represented a fair proportion of dimension, boards, strips and shingles. There is but little really dry lumber coming at present, and it is claimed that there is not much in pile over the lake that has not been disposed of.

Piece stuff has ruled firm in spite of the larger offerings. The lower figure on short lengths has been lifted from $9.50 to $9.75, as indicating a settling and hardening of prices. Very little is selling now below $10, if it is fairly desirable. The frequent sales a week or two ago noticed at $9.50 are now so scarce that that figure may be declared off. It is claimed by some that the numerous offerings during the past three or four days have caused piece stuff to drag a little, while others assert that cargoes have been disposed of with reasonable celerity. It is certain that all the arrivals have moved away from the docks after a short tarry, and there has been no appreciable glut in the market.

Boards and strips are firm and steady at quoted prices. Shipments directly from the mills have been liberal, and the commission men claim that but little cross-piling has been done within a few days past, and that the cut will come forward freely as long as the demand is as good as at present. It is also alleged that as heavy a volume of lumber of all sorts is coming forward as at this season last year.

It is understood that the east shore mills are this year cutting a larger proportion of boards and strips than of dimension, for the purpose of equalizing the prices between the two classes of stock. The decline in the price of dimension from last year's prices is assumed by the manufacturers as having arisen from a disproportionate cut of this kind of lumber, which rather overdid the demand. The change in relative proportions of output may be now carried too far, so that at the close of the season there may be too much inch lumber. The question has been asked: If the mills are sawing mostly boards and strips out of dimension logs, will the quality of inch lumber run lower this year than usual; or, rather, will there be an over-abundance of coarse common?

Quotation are as follows:

Short dimension, green	$ 9 75@10 00
Long dimension, green	10 50@12 00
Boards and strips—No. 2	11 50@13 00
Boards and strips—Medium	14 00@16 50
Boards and strips—No. 1	16 00@22 00
Shingles, standard	2 45@ 2 55
Extra A	2 60@ 2 85
Lath	2 10@ 2 25

Receipts of lumber, shingles, etc., for the week ending June 7, as reported by the Lumberman's Exchange:—

	RECEIPTS. Lumber.	Shingles.
1883	64,817,000	40,709,000
1882	52,735,000	23,798,000

FROM JANUARY 1, 1883, TO JUNE 7, 1883, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1883	288,804,000	250,884,000
1882	546,414,000	233,704,000
Inc		17,180,000
Dec	257,610,000	

STOCK ON HAND MAY. 1.

	1883.	1882.	1881.
Lumber	300,731,016	294,244,311	228,256,644
Shingles	90,070,344	104,027,305	73,698,575
Lath	22,283,445	10,611,535	21,088,756
Pickets	842,291	1,827,993	2,693,844
Cedar posts	113,377	159,937	550,027

NEW YORK.

The *New York Lumber Trade Review* of June 9th, says:—The condition of trade during the week shows but little change siuce last report. The demand has made no progress, the limited quantities passing into distributers' hands being taken without spirit or confidence, and only against wants in sight. Among the yards the opinion prevails that lower prices are likely to rule soon on both yellow and white pine, while the continual free offerings from the mills strengthens this belief, and causes the adoption of caution when stocks require additions. The predictions freely indulged in earlier in the year have failed of realization, and disappointed with the contrary condition of affairs, dealers no longer express themselves as being on the "bull" side of the market, but all, seemingly, have turned "bears" and settled down to await the pleasure of buyers. The active competition to secure the few orders that come upon the market show to what length manufacturers and holders generally are prepared to go, so eager are all to meet those who are willing to assist them in the uuloading process. The prospects are indeed unfavorable. Consumption does not increase with the advauce of the season, but the stock is gradually becoming greater, and this fact makes holders anxious.

Spruce appears to hold its own very steadily. There are fewer orders offering, but the random cargoes as they come to hand are taken at about the rates current last week. For some few undesirable lots in since our last $13.50 has been accepted, but this price does not really represent the market, as any fair cargo can be placed at $14 and up to $16 for a really good schedule.

For orders the current range stands $15.50 @ $17.50, within which a few bills havo been taken, but the orders offering are mostly small, intended to cover early requirements only. Work at the mill is steadily progressing. There is no longer any scarcity of water, though the streams are said to be falling quite rapidly. The new logs, however, are under good headway, and manufacturers count on a full supply.

Orders for hemlock continue to offer quite freely and mill representatives have their capacity well under engagement. Prices are firm, and no change in the value soon is anticipated.

OSWEGO, N. Y.

From Our Own Correspondent.

Since my last there have been some sales reported below opening prices. The market is dull and receipts light for this season of the year. Lake and canal rates are very low; receipts to date as follows: 1883, 45,000,000 ft.; 1882, 67,500,000 ft.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

GLASGOW.

The *Timber Trades Journal* of May 26, says: The past week may be counted as the opening of the early summer market. There have been numerous arrivals to Clyde, as will be observed from the import list; and on the 23rd inst., as noted below, a public sale was held in Yorkhill yard, here, the goods offered consisting of a large fresh cargo of birch and maple logs, also St. John, N. B., and Halifax, N. S., spruce deals.

The stock of last year's birch has been exhausted for a long time past, and this fresh cargo was expected to prove an attraction at the opening of the season; yet, although a good company was present, there was little spirited bidding for the birch or for deals. As noted below, the birch was not of large squares, so that the rates realized appear to be an improvement on last year's prices. A bid of 16d. for maple was given, but as the brokers were unable to obtain an advance on this figure, the wood was withdrawn.

Apparently, from the present weak demand for spruce deals, the supply meantime may be considered ample. Besides the sales of birch appended there were some made privately.

AUCTION SALES.

On 23rd inst., at Glasgow, Messrs. Singleton, Dunn, & Co., brokers:—

Halifax birch (squares, string measure, ranging from 13 to 21 in. and avg. 15 to 16 in.)

400 logs	18½d & 19d	per c. ft.
140 "	19½d & 19½d	"
40 "	20½d & 21d	"

Halifax spruce deals—

9 to 21 ft.	13/14×3	10½d	per c. ft.
9 " 21 "	12×3	11d	"
9 " 21 "	11×3	11½d	"

Do. ends—

3 to 8 ft	7/14×3	8½d	"

LIVERPOOL.

THE *Timber Trades Journal* of May 26, says: The dull condition of our trade during the present week would, so far as it has gone, appear to point out that the consumers have hardly yet settled down to business after the Whitsuntide holidays, as there appear to be comparatively few orders in hand, or if they have resumed business, that the demand in in general is far from strong. The latter supposition is far more likely to be the case than the former, and though it is by no means strange to hear reports from the country that orders are few in number, or trifling in amount, yet a survey of what is being done in the way of deliveries from the yards shows that the consumption of timber, &c., is not what it ought to be to meet the views of merchants. The low range of prices for all kinds of whitewoods ought to stimulate consumption to some extent, as it is difficult to see how they can go lower than they are now, but apparently this has little effect.

Spruce deals continue to be sold from the yard at declining prices, and at Messrs. Farnworth & Jardine's sale of Friday last, the 18th inst., when they offered 40,000 pieces, part of cargo landed ex steamer last season, only about 8,700 pieces changed hands. The lots sold were:—

St. John, N. B., spruce deals—

		£	s.	d.
12 to 15 ft	3×9	7	5	0
16 " 20 " and up	3×7	6	17	6
12 " 15 " "	3×7	6	17	6

all the other dimensions, as well as the broad deals and 4th quality being withdrawn.

The imports continue light, and this should help to reduce stocks, though, with few exceptions, they are moderate and would not stand any great demand upon them without affecting prices, were it not that we are now approaching the general import season; hence there is little prospect of enhanced prices being obtained unless something unforeseen should happen which might give an impetus to the trade. The reports of the condition of the building trades in the various districts supplied from this port are, are, however, so uniformly discouraging that little relief can be looked for in this direction, and we must only trust that the imports will be restricted as much as possible.

LONDON.

The *Timber Trades Journal* of May 26, says: Business at the docks continues quiet, although vessels are dropping in from the timber ports; still numbers are confined to very small proportions, and the cargoes they contribute are absorbed apparently without adding materially to the constantly diminishing piles. At a recent visit to Rotherhithe it struck us the freshly piled cargoes could be counted on the fingers, and we hardly remember to have seen the dock stocks at the end of May so reduced as they are at the present time.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on May 19, says:—The weather being now warm and spring-like, the ports of the upper Bothnian Gulf are opening out rapidly, and before this meets the eye of your readers navigation will have commenced along the whole seaboard up to Haparanda. In the lower ports, the bulk of the first open-water fleet has already arrived, and loading operations commenced. With the exception of the Sundswall district possibly, the tonnage of the vessels arrived is considerahly less than last season. Comparatively few steamers are expected for London and other large importing English centres, while there is, on the other hand, a large number of small sailing craft chartered to convey sawn wood to a diversity of outports, both in Great Britain and on the Continent. The special feature of the present season's business, so far, appears to be that a great number of small transactions have been entered into, whereas large speculative purchases are conspicuous by their absence.

The same inanity and want of life which has characterized the f. o. b. trade the whole of this year still continues. An occasional transaction of a retail character is reported, but, with the exception of the purchase of about 1,000 standards of Sundswall goods at low prices, nothing of note has come under my ken this month. The Sundswall purchases in question are reported to have been affected at a trifle under a £10 basis for mixed 3x9 and 11 redwood; but I consider it right to mention that the transactions referred to are scarcely a criterion of the state of trade, terms of payment being exceptionably favorable for the seller. Considerable quantities of 2½x6½ and 7 whitewood battens, as well as 3x11 white deals, are being inquired for from Scotland and elswhere, but the prices offered—viz., about £4 7s. 6d. and £5 5s. respectively for unassorted f.o.b. lower Gulf—are so low that business seldom results.

The larger holders of good redwood marks between Gefle and Sundswall are still disinclined to make large concessions on their list prices to induce business. Their argument is something in this wise: "What is the use of our reducing prices for one-third of our season's production, when we have obtained our quotations for most of the remaining two-thirds, and when we know that stocks are not large abroad, and that a fair consumption is going on, which will compel London and other large English ports to pay our rates before long? We prefer holding our unsold balance in the meantime, and reducing our production by working shorter hours." Such is the reasoning of more than one large exporter, and I leave it to my readers to form their own estimate of the value of the arguments.

I remarked, a short while ago, that the Spaniards have bought pretty freely of Swedish goods this season. According to no less an authority than Mr. H. R. Astrup, of this city, we are informed that one Swedish mill has already this season sold to Spain wood goods to the value of about £60,000. This is probably the largest quantity that has hitherto been placed in that country by one concern during the course of a season, and gives additional probability to the opinion of those that hold that, with the possible exception of the Australian Colonies, there is no market which gives such promise of increase in the consumption of Swedish sawn and planed wood within the next decade as Spain, supposing the import duties there to be satisfactorily and permanently regulated, Mr. Astrup thinks the export on such conditions likely to reach nearer 100,000 standards annually than the present 25,000 standards, within ten years.

According to intelligence from Berlin, the German Reichstag has cast out the Government Bill to increase the import duties on wood goods for that country. This is causing an increased demand for rough red boards and whitewood battens for Germany, and several transactions are reported from the Sundswall and Henosand districts.

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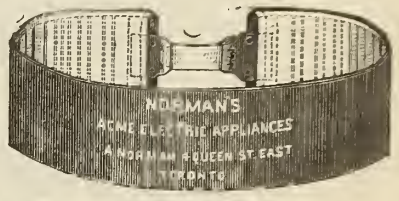

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A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
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WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

THE RAFTSMAN'S LIFE.

Since the opening of navigation several gangs of raftsmen have been employed at the Northern Railway docks in constructing the timber which arrived there over the different railways, into rafts to be towed to Quebec and then shipped to Europe. Within the last decade the quantity of timber received at this port has materially decreased, and as each succeeding year greater inroads are made upon the primeval forest of Ontario, the total extinction of the trade is but a question of time. As yet, however, it retains respectable proportions, and this spring nearly half a million dollars worth of timber will be constructed into rafts at the Northern Railway docks, and forwarded to Quebec. The bulk of this timber is rock elm from Muskoka, but a considerable quantity of walnut and other fine woods have a place in the collections. The firm who build the rafts have men at work in the woods all winter cutting lumber, which is dragged over the snow to the nearest railway where, as soon as spring opens, it is shipped to Toronto. When the lumber train arrives here it is shunted on a siding close to the margin of the dock, and then commences the work of raft building. A gang of men roll the logs from the car into the water, where a wire rope is hitched around them. By the aid of a horse power which revolves on a strongly built raft, the logs are hauled to any spot desired with rapidity and ease. The timber is first formed into a small raft, which is called a dram. A dram is generally about 50 feet wide, by 300 feet long, and contains from 25,000 to 40,000 square feet of timber. The logs are bound together in a solid mass by maple saplings, which are so twisted by machinery as to be extremely pliant. After a number of drams have been completed a steam tug tows five or six of them to Prescott, where they are formed into one great raft, which generally comprises about seven drams. This immense mass of timber is then towed down the St. Lawrence until the rapids are reached, when the raft is broken into single drams and in this way passes the many rapids of that mighty stream. The crew who man the rafts are thoroughly conversant with the intricacies of the channels, and it is very seldom that a raft comes to grief among the rushing waters. About two weeks is the time generally consumed in making the voyage from Toronto to Quebec, but of course if the weather is unfavorable a much longer time is occupied in the trip. When the timber reaches Quebec it is cut up into lengths suitable for shipment, and is then forwarded to England by sailing vessels.

A few seasons ago it was not an uncommon thing to ship 40 drams of timber from Toronto by raft, but this season only 20 drams will be made up. The value of these is about $20,000 per dram, so that the total value of the timber made up at the Northern Railway docks will not fall far short of half a million dollars. The number of men employed at the work is about 120, principally French Canadians. For some reason or other the light and volatile French Canadian seems better fitted to endure the alternate hardship and ease of a raftsman's life than his Ontario fellow-countryman. At all events, but very few Ontarians follow the raftsmen's hazardous calling. The party who have been working at the rafts at the Northern docks here are what the late Artemus Ward, of facetious memory, would term a "gallus lot." Accustomed to the easy romantic life of the lumbering camp, their free spirit revolts at the idea of submitting to the restraints imposed by civilized life. They cherish a deep-rooted antipathy to living in a dwelling-house, and to humor this fancy, their employer has given them quarters in several old shanties in the lumber yard, adjoining the docks. In their humble quarters here they seem to be supremely happy, and seemingly enjoy their free and easy style of living quite as much as the pampered child of luxury enjoys his style. In the evening, when the labors of the day are over, the men assemble in the yard and adopt various devices for killing time. The musicians of the party will bring out their instruments and furnish the music to which some giddy youth will trip the light fantastic. The yards resound with the music of the deep voices of the lumbermen as they gaily trill short snatches of some old French song. Some amuse themselves by playing euchre and other sinful games, with packs of cards that look as if they had seen the service of many winters. The curiously inclined gather around the "oldest inhabitant," who, with that veracity characteristic of ancient residents, tells his open-mouthed audience of the hair-breath escapes which he had from death while running a raft down the mighty St. Lawrence. In these and sundry other ways they manage to pass the time, and each evening their quarters are visited by large crowds of citizens who are anxious to view a realistic representation of life in a lumbering camp.

In the winter months the raftsmen busy themselves in cutting timber in the woods, and when the return of spring loosens the ice king's grasp on the mountain's torrent, the raftsman has often to guide logs down to a spot where it is convenient to ship them from. This is a situation that requires great steadiness of nerve and courage, and it is no infrequent thing to hear of adventurous lumbermen getting drowned while taking a drive of logs down stream.

After the raft building operations are concluded each year the men receive their well-earned wages, and so often go on a prolonged spree which lasts until their money is exhausted. In the fall they are generally as badly broke as the ten commandments, and anxious to go into the woods for another winter. This routine continues while their health can stand the strain, and when asking the lumberman what becomes of the men who were too feeble to go back to the woods he answered simply "God knows."

The men who are working on the rafts this spring are a very quiet and well behaved lot. Since their arrival here the police have not once been called on to suppress any disturbance. In a few days the men will take their departure, and instead of the merry shouts of the raftsmen, the shrill whistle of the propeller, and the gruff voice of the schooner captain, as with many unscriptural quotations he urges his crew to increased diligence, will be the sounds that will break the nightly stillness of the lakes.

VICE-ROYALTY ON A CRIB.

OTTAWA, May 29.—The first crib of the season began to come down the slides yesterday, and his excellency the Governor-General and Her Royal Highness the Princess Louise, having expressed a desire to "run the slides," special arrangements were made for their reception. About five o'clock in the afternoon His Excellency and Her Royal Highness, attended by a numerous suite, drove to the head of the slides at the Chaudiere. Here a raft constructed with unusual care of timber belonging to the Messrs. White, and fitted with rough but secure seats for the accommodation of Her Royal Highness and the Ladies in Waiting, was lying in readiness. Having boarded the frail-looking craft, Mr. W. A. Humphrey, who acted as pilot, took charge of the raft. Some half dozen raftsmen, carefully selected for their experience and trutworthiness, formed the crew, and under the watchful eye of Mr. Humphrey the rafts with its distinguished passengers passed through the danger of the slides without accident and mishap of any description. About six o'clock it shot out into the broad expanse of the river opposite the Parliamentary grounds where the steamer which plies between Hull and the Outario shore ran out to meet it, and took the Vice-Regal party ashore. His Excellency and Her Royal Highness expressed themselves as being delighted with the success of the trip, and paid many well-merited compliments to the raftsmen. Amongst the Vice-Regal party was Mr. Samuel L. Clemmens' "Mark Twain" who will now have another chapter to add to his rafting experience.

PROPOSED FORESTRY CONGRESS.

A new item has been going the rounds of the Southern press to the effect that a proposal has been made to hold a Forestry Congress at Lake de Funiak, in Florida, during the month of March, 1884. It does not appear under whose auspices the proposed Congress is to be held, nor has anything transpired showing who are to be invited to attend its deliberations or take part in its discussions; but the forestry interests of the South are among the most important of its industries, and it is an encouraging sign to find that someone has become aroused to the necessity of conserving the vast reserves of growing timber that abound in that section. Lake de Funiak, which is on the line of the Pensacola & Alabama R. R., is a new town, but it is in the midst of forests, and is in an appropriate place for such deliberations to take place. If taken in hand by well informed men of practical knowledge and intelligence, such a meeting ought to result in benefitting the important lumber, as well as agricultural interests of the Southern States; but preserve us from a gathering of *doctrinaires*, whose chief object in attending such a convocation would be for the purpose of ventilating well-worn theories that are as impracticable as they are useless. The importance of tree planting in this country can not be over-estimated, and anything that will stimulate the interest that ought to be felt upon this question, should receive the support and co-operation of lumbermen.—*N. Y. Lumber Trade Review.*

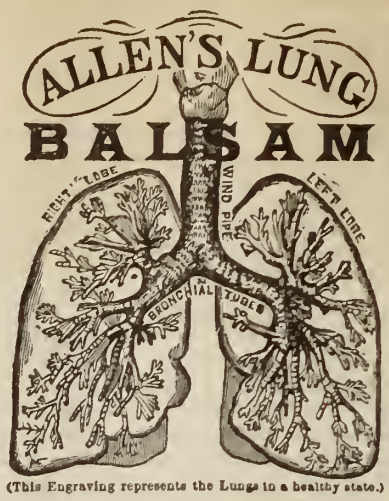
Logs "Banked."

The *Lumberman's Gazette* of Bay City, Michigan, says:—The storms of the past week were exceedingly destructive for the lumbermen on the rivers in the loss of logs, quite a number of rafts being broken up and the logs scattered along the shore in almost inextricable confusion from the mouth of the Saginaw river to the mouth of the Au Gres. Messrs. Chapman & Co., I. H. Hill & Son, and some others are among the losers by the heavy northwest gales, which thus scattered their logs, and sent the tugs flying to the river for shelter. The Bay City Lumber Company had their rafts containing nearly one and a half million feet of 20 per cent. logs banked between the mouth of the Kawkawlin and Saginaw rivers, and some of them so effectually banked that it will cost as much as the worth of the logs to secure them again.

A New Canal.

The Florida ship canal scheme is likely to result in the actual opening of a water-way from a point near Jacksonville, on the St. John river, to a connection with the Suwanee, near the Gulf of Mexico. The purpose is to construct a canal capable of the passage of the largest ocean steamer. The company has been formed and is ready for business. This work will shorten the distance between gulf ports and the Atlantic 800 miles. It will be important to the yellow pine trade of Pensacola, Mobile, and other producing and shipping points on the gulf coast, as it will shorten the route to New York and Boston by nearly a thousand miles, and obviate the dangers of navigation among the reefs around the southern end of Florida.—*Northwestern Lumberman.*

MENTAL depression, headache, and nervous debility, are speedily remedied by that excellent blood-purifying tonic, Burdock Blood Bitters. The Editor of the Mitchell *Recorder* states that he was cured of biliousness, liver derangement, and sick headache, by the use of this medicine.



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TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhœa, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c

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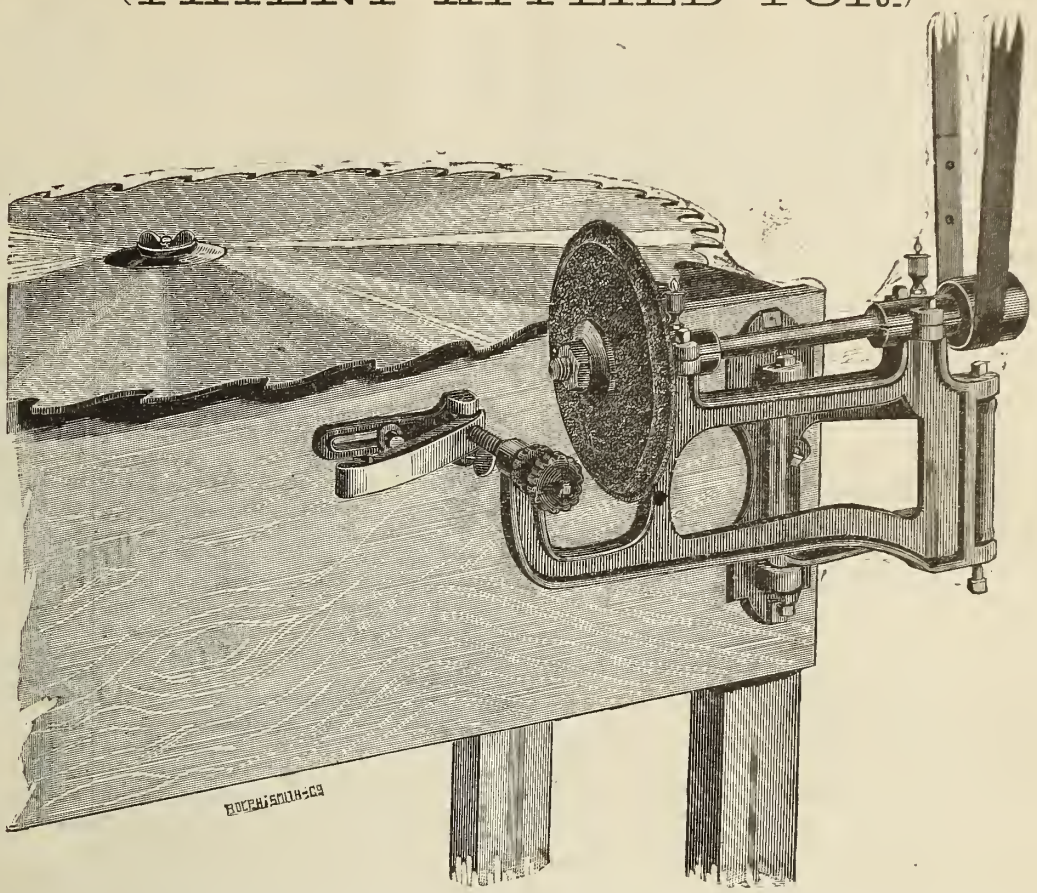

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FROM THE JAWS OF DEATH.

On Tuesday morning a young French Canadian mill hand named Narcisse Meunier, in Eddy's new mill, at Hull, Que., had one of the most marvelous escapes from death on record. It seems that while attending to his duties in the lower part of the mill he slipped and fell into the water beneath. At this point the stream resembles a gigantic seething cauldron, but notwithstanding the warning of the rushing waters Narcisse, who is a powerful swimmer, struck out boldly for the shore. In spite of his efforts he was hurled down the waterway towards the Devil's Hole, where the stream enters the underground passage. Nothing daunted by the tremendous strength of the current, against which he was battling, Narcisse continued to fight for his life. At length he succeeded in getting near enough to the shore to clutch a projecting piece of rock, to which he held until rescued by some parties who had witnessed the accident. When the news spread about the mill that this had occurred few could credit it, as it was considered utterly impossible that any man could have fallen into the maelstrom beneath the mill and escape with his life. When he fell into the water he shouted as loud he could, but the noise of the mill prevented his cries being heard, consequently his fellow workmen did not know of the occurrence until it was over. Fortunately for him some outsiders happened to see him clinging to the rock on the shore with the energy of dispair, while the force of the current was almost tearing his arms out of their sockets, and came to his rescue. Had it not been for this he would inevitably have been sucked down into the Devil's Hole and probably never heard of again. No description can give the faintest idea of the dangers of this spot, but after one glance at it it seems incomprehensible that a human being should have been there and survived. A reporter called at the mill to get the particulars of the affair from Meunier. Notwithstanding the fearful peril from which he had been rescued a few hours before, he was coolly engaged at his usual work as though nothing out of the way had happened. He is a stoutly built young fellow of about nineteen summers, and although he looked rather pale after his battle with death, he made light of the affair. In answer to an enquiry by the reporter he shrugged his shoulders and said he didn't feel very bad at the time, but he wouldn't like to be there again.—*Ottawa Citizen.*

Two-Horse Load of Tooth-Picks Daily.

Where do the tooth-picks come from? A Maine newspaper states that the little town of Sebec, at the outlet of Sebec Lake, Piscataquis County, in the interior, has one of the best waterpowers in the state, but has never been fully developed. A tooth-pick factory there is doing a large business, using over a thousand cords of poplar and birch wood annually, turning out a two-horse load of tooth-picks daily, and employing from 12 to 15 girls and 8 or 10 men. A private letter from the place states what the newspaper omitted, that "the tooth-pick mill gives employment to as many girls as can afford to pack a hundred boxes for twenty-five cents, and feed themselves." This seems very small wages for women, but board is cheaper there than in the city, and probably many of them board at home, and would be unable to earn as much otherwise.

A Good Wager.

The "Greendale oak" in Welbeck Park is called "the Methuselah of trees," and writing of it in 1790, in his "Descriptions and Sketches of Remarkable Oaks at Welbeck," Major Rooke said the tree was then thought to be 700 years old. In 1724 an opening was made in this oak large enough to allow a carriage, or three horsemen abreast, to pass through it. At that time the girth of the ancient tree above the arch was nearly 36 feet, the height of the arch was 11 feet, and the topmost branches were 54 feet from the ground. On the estate the story is told that a former Duke of Portland, in an after-dinner frolic, made a bet of 1,000 guineas that he could drive a coach and six through the body of the tree without touching the bark, and that he accomplished the feat and won the guineas.

CLARKE'S ETIQUETTE.

An Oshkosh, Wis., paper relates the following incident in the history of the Hon. J. C. Clarke, familiarly known as Jack Clarke:—"About one quarter of a mile below the dam at Merrill, the Lincoln Lumber Company own about 30 acres of land, on which they have erected a saw and planing mill. They have a double gang and a circular saw, having a capacity, for manufacturing 130,000 feet of lumber per day. Last fall John C. Clarke, of Wausau, took and interest in the property and was elected general manager, and under his supervision the mill has received a general overhauling, so that now it is about as perfect as a mill can be. A story is told of Mr. Clarke that is worthy of repeating. When he took charge of the business, he found in the office several young gentlemen who were somewhat on the dude order. The new superintendent is a plain man, and he does not believe much in standup collars, tight breeches and eye-glasses. When dinner was announced, all parties took their seats at the table. By the side of each young gentleman's plate laid an elaboratley carved ring and napkin. One glance was sufficient, and the new superintendent broke out with "Well, young gentlemen, what do you do with those things?" Receiving a reply, 'We wipe our mouths with them.' 'You do? Well, you can pack up your traps and seek other sights and scenes, for I never employ men that do not wipe their mouths on their shirt sleeves when they eat.'"—*Northwestern Lumberman.*

THE EXTINCTION OF FIRE BY STEAM.

The frequently proposed application of steam for the extinction of fire has recently met with a practical application in a steel-pen manufactory in Berlin. The owner of the factory, in consequence of frequent conflagrations in the drying rooms for wooden penholders, had three small steam pipes, in connection with the steam boiler of the establishment, fixed in three such rooms. The ends of the pipes were closed by a short piece of pipe, made of an alloy of lead and tin, which would quickly melt should fire break out, when steam would at once rush out. To prevent the steam inside the pipes from hindering the melting of the ends, the latter were filled with resin. Quite recently the stoker was warned by a hissing noise that fire had again broken out in one of the drying rooms, and when it was entered it was found that such was the case, but that only a small portion of the contents had been destroyed. The other combustible materials in the room, frames, walls, and floors, were found to be only saturated with the condensed steam, a portion of the penholders still smouldering. The heat caused by the breaking out of the fire had melted the ends of the pipes, and thus caused the heat to escape, which had extinguished the conflagration at its commencement without the intervention of the hand of man. It is probable that this ingenious and valuable contrivance, which is especially suited for large factories or stores, will find a wide application in the near future.

Matters in Maine.

A correspondent of the *Lumber World* says: It has been very unfavorable weather in this vicinity this spring for stream driving, as we have had very little rain. We had little or no thaw during the winter, leaving the snow light and but little water in it. It went off by the sun so slowly that the small streams did not get water enough to bring out the logs. The first rain of any account was on the 22nd, and that not very great, but it raised the streams considerably for a few days. The prospect is now that there will be a large amount of logs kept back that cannot be got out this spring. The prospect for sales of lumber is good, so far as for heading for West India trade, and home consumption for box-boards, which constitutes nine-tenths of all the Saco river long lumber. All the mills that saw oak for shooks are overstocked, which makes shooks low, as they have fallen from $1.25 to 80 cents and must be low for a year to come.

Of the five hundred men at present at work on the Moira timber drive, 200 are in the employ of Messrs. Rathbun & Son, Deseronto.

RAFTS ARRIVED AT QUEBEC.

The *Chronicle* gives the following list of rafts, &c., arrived at Quebec:—

MAY 25.—Jean Voyer, deals, Connolly's Mills.

Ross Ritchie & Co., deals, Three Rivers and St. Maurice.

Calvin & Son, staves, Bowen's Cove (Sillery).

Ross & Co., oak, &c., Cape Rouge.

MAY 30.—Sundry persons, oak, &c., Cap Rouge.

J. McRae & Co., oak, &c., Cap Rouge.

JUNE 1.—Collins Bay Co., oak, St. Michael's cove.

Collins Bay Co., oak, sundry coves.

Burton Bros., sundry woods, Sillery cove.

JUNE 7.—J. McLaren, white pine, St. Lawrence Docks.

E. L. Kelsey, staves, Union cove.

" " New Liverpool.

Simon Wigle, " Woodfield.

Monster Conveyance of Real Estate.

Probably the largest conveyance of real estate ever made in the Dominion to a private individual was made in Quebec on Thursday, June 7, the vendors being the executors of the estate of the late G. B. Hall, of Quebec, the well-known timber limit and saw-mill owner. The purchaser was L. A. Senecal, and the property transferred comprising, among other features, the famous saw-mills at Montmorenci Falls, the Radnor forges, near Three Rivers, and over 2,662 square miles of timber limits in this Province alone, besides various other lands in the Eastern Townships and elsewhere. The deed, which covered 260 pages, was signed on his own behalf by Mr. Senecal, who paid down $250,000 cash on account of the purchase price of $1,600,000. Hon. Geo. Irvine, who leaves shortly for Europe on professional business, acted as legal adviser of the Hall estate.

Salt Preserving Timber.

It is a curious fact, says the *Carpenter*, that in the salt mines of Poland and Hungary the galleries are supported by wooden pillars, which are found to last unimpaired for ages, in consequence of being impregnated with the salt, while pillars of brick and stone used for the same purpose, crumble away in a short time by the decay of their mortar. It is also found that wooden piles driven into the mud of salt flats and marshes last for an unlimited time, and are used for the foundation of brick and stone edifices; and the practice of docking timber after it has been seasoned, by immersing it for some time in sea water, is generally admitted to be promotive of its durability.

MELLY'S saw mills, at Somerset, Que., were burned on Sunday, June 10th. The loss is estimated at $10,000.

THE St. Paul *Pioneer-Press* gives a statistical review of the season's lumbering operations in the Minnesota and Wisconsin woods. The aggregates reveal the stupendous magnitude of the business. The total cut of the two states exceeds 4,000,000,000 feet. This represents the trees growing on 1,250 square miles. The Chippewa valley region of Wisconsin contributes nearly 1,000,000,000 feet, the Mississippi above Minneapolis nearly 600,000,000 feet, the Wisconsin river 441,000,000, the Duluth district 297,000,000, and the Black river 228,000,000. The streams on the west shore of Lake Michigan, grouped together for convenience, show a cut of 785,000,000. On the different railroads in Wisconsin and Minnesota about 600,000,000 feet were cut. The cut is by far the greatest in the history of the Northwest.

THE *Central Canadian* says:—The activity one beholds about Mr. Peter McLaren's mills and yards is truly wonderful. Night or day there is unbounded bustle. The great head himself is nearly always present somewhere. Occasionally he goes into the yards where there appear to be dozens of men both piling up and pulling down; and when he speaks to them it is in a friendly sort of way—the kind of tone and the kind of words that make men say: "A first rate man, that." The wages are very high this year—higher, we believe than ever before—and this puts fire into the men, who keep a cheerful sunlight in their faces all the day. We hear no real cases of discontent. Though the work is heavy, it is not constant; and there are many chances to rest. The machinery gives entire satisfaction, and everything runs with the regularity and harmony of clockwork.

THE *Timber Trades Journal* says:—We learn that a couple of cargoes of deals, &c., despatched from the Surrey Commercial Docks to the Island of Cypress about the time of the termination of the Egyptian campaign last year, in the expectation of considerable building operations being carried on there, are still unused. In fact, it is reported that they lie just as they were discarged from the vessel, with very little prospect of their being called into requisition, and the off chance of never being used at all in that region. It would be interesting to know how the deals have stood the long exposure out there, and what they would be worth for transhipment elsewhere. We believe the stuff was sent to Cyprus for the purpose of constructing barracks for the soldiers and other buildings in connection therewith, but the troops have been withdrawn, so the deals are apparently useless.

THE Buffalo *Lumber World* says:—A great variety of wood will be used in the manufacture of furniture this season. Walnut still remains in favor, and is quite expensive. Mahogany is also much used, the variety known as San Domingo mahogany being very desirable. It has an excellent yellow tone, growing richer and darker with age. Amaranth is among the rare varieties, its beautiful purple surface taking a high polish and carving finely. Leopard-wood shows a yellowish ground, with darker spots, and is rich and effective for screen frames or panels. Butternut resembles oak, and takes a carved decoration well. Satin wood is much used, and cherry is quite a satisfactory substitute for mahogany. Unstained cherry is a yellowish brown color, and can be used with good effect. Ebony is somewhat out of favor, the genuine wood being very expensive, while the imitations are always unserviceable and disappointing.

ONE OF MANY.—Mr. R. W. Carmichael, Chemist and Druggist, of Belleville, writes as follows:—"Your Burdock Blood Bitters have a steady sale, are patronized by the best families here and surrounding country, and all attest to its virtues with unqualified satisfaction."

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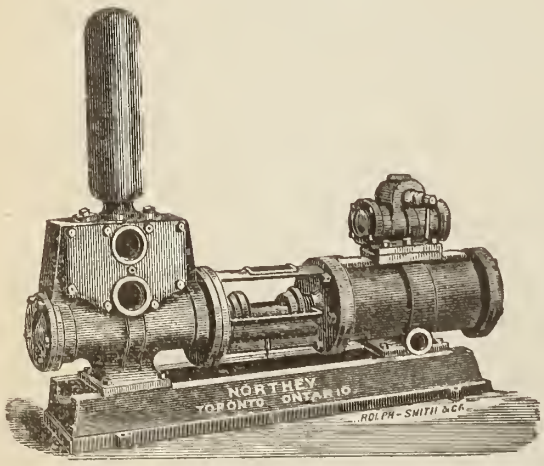

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VOL. 3. PETERBOROUGH, ONT., JULY 2, 1883. NO. 13.

A HEMLOCK-BARK conceru at East Templeton, Ottawa river region, has 100 men stripping bark, and intends to get out 1,000 cords.

MR. E. B. EDDY, of Hull, will, it is stated, shortly establish a paper pulp factory in that city on the site recently occupied by Batson & Currier. He expects to utilize in this way all the sawdust and refuse of his saw mill.

IN one day Thomas Hall, with eighty hands, 75 Indians and five whites, put over the Chats slides and rapids a raft containing 170 cribs of white pine and other cribs, amounting in all to 206 cribs, which were rafted and got off the same night. This is probably the biggest day's work of the kind on record.

THE *Timber Trades Journal* has the following paragraph on "Yellow Pine," being our "white pine :'—This question of dryness is an important consideration in regard to yellow pine, fully seasoned wood being intrinsically of much more value than stuff freshly manufactured. In Baltic goods, on the contrary, the fresher they are from the mills the more the trade here like them. Of course we do not mean to infer that green wood is as marketable as seasoned, but all deals are supposed to have undergone a process of drying before shipment.

The *American Lumberman* of New Orleans says :—"Squatter sovereignty" is a persistent enemy to our magnificient pine forests, and its rule is everywhere found in the shape of thousands of trees girdled and left to decay around thriftless and abandoned homes, hundreds of which are found throughout the pine lands of the South. The vandals generally remain long enough to destroy what they can of what is valuable, and then move to some other section to repeat their work of devastation, an evil as far reaching and as pernicious in its effects as the forest fire. Both are evils which should as far a possible be cured by prompt and proper legislation.

THE London *Timber Trades Journal* of June 2nd, says :—It is satisfactory to record, that if the deliveries are on a moderate scale, so are the supplies that have to replace them. Twenty-seven vessels only have to be recorded with timber goods in the port of London for the seven days ending with the 29th, or about 15 short of the number that put in appearance the last week of May, 1882. The next Board of Trade returns will be awaited with some curiosity by the leading importers at the chief centres of trade, and if they show that the same limited scale of supply has prevailed generally in the United Kingdom through the month of May as we had to chronicle in April, a better feeling may be expected to assert itself for the rest of the season among buyers.

PROSPECTS IN ENGLAND.

The *Timber Trades Journal* says :—It has been shown in our columns, and corroborated by the Board of Trade returns, that there has been a great falling off in the importation of foreign timber into this country up to the beginning of the month of May, nor has there been any excess of importation since, and it is the opinion of many that, however delayed, this backwardation will have to be made up before the season comes to an end. If this theory be admitted—and it is certianly very plausible—nothing is more likely than that the state of markets will ere long begin again to favor the shippers abroad, and that a brisk fall trade at remunerating prices may compensate them for the absence of the usual demand on their stocks in the earlier months of the year.

By the tone of our correspondent in Sweden, we may reasonably assume that there will be some curtailment in the production at the sawmills over there, though whether this will be on a sufficiently large scale to appreciably affect f. o. b. values during the present season it is impossible to say without more data to go upon. With any improvement in the demand we fear the resolve to work short time, to which the Swedish shippers have seemingly agreed, would soon disappear, and stuff might be cut to more than meet the revived requirements. But in any case a greater business is likely to be done shortly, if at no better prices, though with the consumption accelerated it is difficult to see how these can be kept from advancing.

We shall not expect to see much improvement, however, till we hear of ships for charter being in more request, because the action of producers in limiting their manufacture will not stimulate the consumption unless a real revival of business takes place over the country in every direction. That the prospects of fall business are more encouraging may be traced to the fact of the present greatly reduced stocks here rather than to what they represent upon the other side. When once buyers begin to find they may be late in getting what they require, a tone will be given to the market which can hardly fail to render values firmer.

In the meantime the cutting trade that is now done keeps quoted prices very low, though for the leading stocks little alteration has been made on last week's prices. If anything, they are already hardening, but taken one with another we consider there is nothing to denote any upward inclination.

Common deals are sufficiently cheap to induce sales, but stocks of this description are plentiful enough to make buyers indifferent as to fresh purchases except at a still futher reduction.

As to best goods, these, though wanted, are not in such demand as to make dealers anxious to supply themselves, and they continue to decline transactions except for immediate wants, at shipper's present holding values. So the market stands, the buyer having rather the best of it; the immense facilities for supplying himself which the public sales here afford, if only on a limited scale, induce him to import only sparingly and to keep on the outskirts of the market until he sees some outward and visible sign that the trade is again moving ahead.

The one favorable fact of a diminished supply is all that we can at present adduce in favor of an approaching upward movement in the trade; but is an important fact, and is more to be relied on than a dozen rumours of short supplies abroad, rivers running dry, or great orders going out from other countries to clear away the stocks that were intended for us.

SUGAR OR ROCK MAPLE.

The following paper on the Acer Saccharinum, is by Jacob W. Manning, Reading, Massachuesetts :—

This is in a broad sense an American tree, for it extends from the extreme eastern part of North America to the Eastern Rocky Mountains, and from the highlands of the Gulf States to the watershed between the waters of the St. Lawrence and Hudson Bay. In all this territory it is found at frequent intervals on elevated land and along rivers, and is at home in all rocky formations.

This tree is often from three to five feet in diameter, and seventy to eighty feet high, large and straight enough to make ship-keels, growing naturally without any aid from man.

I measured a tree in Northampton, Mass., that had been planted sixty years that was eleven feet six inches in circumference, three feet from the ground; even this is small compared with some natural trees seen in old pastures.

The wood is close grained and solid, and one of the handsomest of all light colored woods for furniture and house finish. The bird's-eye, curly and branched maple veneers that make such a rich and varied finish are made from it. It is almost the only wood used in the manufacture of boot and shoe lasts, for which a surprisingly large amount is used, and in many other industries where a solid and close-grained, but light wood, is necessary. As fuel it is but little excelled by any other wood.

No other native plant growth produces such delicious syrup as the rock maple. A sugar orchard is a valuable addition to a farm; even our street and lawn trees can be tapped without injury; they appear to grow as finely and live as long as those not robbed of their sap, which one would suppose was their vital fluid.

As a street lawn or park tree it is justly valued as one of the best American trees. It is thrifty, comparatively free from insects, and is sure to grow into a well balanced tree in nearly every locality. The shade is very dense, and yet grass will grow quite freely under single specimens where the wind blows off the leaves.

In planting, to prevent monotony, it is well to intersperse other trees of different outline. The gorgeous autumn hues of our forests are largely due to this maple. I witnessed at Newburg, N. Y., on a cloudy fall day in suburban home grounds, laid out by the lamented A. J. Downing, the very best effects in the varied hues taken on by this tree; interspersed among other kinds, each with its own peculiar autumn color, and some still green, but the rock maple outshone them all.—*Boston Traveller.*

SHIPPING FOR TIMBER.

The New Orleans *Times-Democrat* complains of the scarcity of tonnage combining large carrying capacity with light draft. It says :—"Our commerce with Mexico, Texas, British Honduras and South America is increasing yearly. More especially is this felt in lumber, but restricted to a class of vessels which are compelled to charge a rate of freight which exceeds in many cases more than one-third the cost of the lumber itself, delivered alongside; the mills can ship nothing but the choicest article, leaving on their hands the cheaper grades and offal. This necessarily entails a higher price being charged for the lumber, and, in consequence, the purchaser is deterred from ordering more than he barely needs. But once let the rate of freight, by employment of the right class of vessels, be reduced; let the mills once be able to lay down the whole cut of the log at the point of delivery, then they in turn can afford to cut cheaper and thus attract orders. The volume of business, it is safe to predict, would be more than double what it is now. Mill owners in the Sonth are, as a rule, hampered for capital, and need all of their means for the development of their bnsiness, and cannot afford to embark in a business which is separate and distinct from their own. Yet so severely is the want of this class of tonnage felt that some of our largest mill owners along the Gulf coast are building vessels of their own, with a view of making themselves independent of chance and the exactions of ship brokers. Another feature in connection with this business is the fact, that, could the different ports to the south of us, which have but 7 or 8 feet of water on their bars, rely upou a sufficiency of cheap and light draft tonnage, trade would be stimulated to an exteut never kuown before. In return for our yellow piue and other products, regious of the valuable woods of the topics, mahogany, cedar, fustic, etc. would be opeued up, and vessels which now in a majority of cases return empty, would be guaranteed good freights back. The field is a promisiug one, aud while, for lack of space, we must bring our article to a close, we canuot refrain from inviting our moneyed men to give this subject the earnest attention it deserves, promising ourselves at some future time to treat it more exhaustively and fully.'

LUMBER FIELDS.

The aggregate results of the logging operations in the Minnesota and Wisconsin woods reveal the stupendous magnitude of the northwestern lumber interests in a light which will probably astonish persons most familiar with the subject. The total cut of the two states exceeds 4,000,000,000 feet. The mind will be better able to grasp this unwieldy number when it is understood that it represents the trees growing on 1,250 square miles, or about 35 townships of land. In the classification of districts, the great Chippewa valley region of Wisconsin is easily first, with 1,000,000,000 feet on the Chippewa, Eau Claire, and their tributaries. The Mississippi above Minneapolis comes next with 600,000,000 feet. The Wiscensin river returns 441,000,000, the Duluth district 297,000,000, and the Black river 228,000,000. The streams on the west shore of Lake Michigan, grouped together for convenience, show a cut of 785,000,000 feet. On the different railroads in Wisconsin and Minnesota, between 500,000,000 and 600,000,000 feet were cut. The cut is by far the greatest in the history of the northwest.

There is a great truth to which this enormous growth in the logging interest in the northwest points. The swift and surprising development of the country west of the Mississippi river has created a greater revolution in the lumber business than in any other interest that supplies its various demands. Within the last few years the onormous demand from the west has revolutionized the lumber trade in its sources, its methods, its channels and its markets. This year's investigation reveals clearly the fact, more vaguely understood before, that the destination of nearly all the lumber cut in Wisconsin and Minnesota is the treeless prairies and magically-up-springing new cities of Dakota, Montana, Nebraska, Iowa, and even the more southern states. Chicago, once the lumber market of the whole west, gets now only a fraction of the enormous product of Wisconsin and Minnesota, and the magnet of the western demand attracts the lumber from the cheap water routes of the lakes to the westward railroad lines. Nearly all the lumber cut on the shores of Lake Superior goes west by the Northern Pacific. The Wisconsin Central carries a little to Milwaukee, though much of the traffic by that line is diverted by the westward lines it crosses. The great lumber centres of the Chippewa, Black and Wisconsin valleys are drained by the Omaha and Milwaukee and St Paul to the west and southwest. Even the lumber on the west shore of Lake Michigan, within easy reach of cheap water transit to Chicago, chooses instead a circuitous route by the Chicago & Northwestern road across Wisconsin, Minnesota and Iowa to the omnivorous western prairies. The once all-absorbing lumber trade of Chicago is reduced to the handling of so much of the Michigan product as is required for western consumption.

The stimulus of the western demand has changed the methods of lumber production and transit, as well as the direction of the market. The present or prospective exhaustion of the richest and most convenient tracts on the margins of navigable streams, while the demand is annually increasing, compels a resort to new sources and a more careful gleaning of old. During last winter many tracts were cut for the second or third time. Higher prices and an eager market made it profitable to return to second class timber, windfalls and smaller growth, neglected in former years. So far as this tendency leads to a cloaner and more economical reaping of the pine harvest, it is to be commended. It may work harm, however, by causing the destruction of half-grown trees, which contain the promise and potency of the future timber supply. A still more important change in the methods and sources of lumber production is the adoption of means of reaching rich tracts remote from the channels of navigable streams. To an extent not generally understood, the railroads are taking the place of rivers as a means of transit of the product, even from its first source. Hundreds of millions of feet of logs are taken to market every year that never float for a mile on the waters of rivers. Railroads are penetrating the lumber districts in every direction, the North Wisconsin, the Chippewa Valley, the Wisconsin Central, the Northwestern on the Michigan shore, whose sole or main business is the transportation of lumber cut on their lines, hauled to mills at their stations, sawed into boards and loaded into cars without ever seeing a raft or a boom. In many places narrow guage roads are built from the main lines into remote tracts, to enlarge the field from which supplies may be drawn. This change of method adds a large percentage to the available supply, and hastens by as much the rate of exhaustion of the forests.

The question of the prospective exhaustion of the pine timber of the northwest will suggest itself to every thoughtful person. There is no question that the time is swiftly approaching when the forests of Minnesota and Wisconsin will no longer answer to the annual demands made upon them, nor that the day is hastened by the extravagant and destructive methods of production, happily less common now than a few years ago. A pine forest is a thing of slow growth, and those of Wisconsin and Minnesota are definitely limited, though still of vast extent. They cannot indefinitely endure the stripping of the available timber from 1,250 square miles per year. The period of exhaustion of the northwestern forests has been the subject of speculation. It is vaguely put at ten years, but there are no data to justify such exact computation. The demand is variable, and there is no means of estimating what the supply may become under changed conditions. Poorer and less accessible timber will be made available by improved methods, and the pine lands remaining will probably be made to go much farther than the same quantity in former years. But the certain fact that the forests are destroyed much more rapidly than they are replaced with new growth, makes their exhaustion only a question of time. There are few virgin tracts left now. The loggers are already invading the Red Lake and Vermillion districts in Minnesota, and the railroads have penetrated to the hitherto intact forests above and between the heads of navigable streams in Wisconsin. Whether ten or twenty years hence, the exhaustion of the northwestern lumber supply is near enough to suggest the most careful husbanding of the resources that remain, and to emphasize the blind and mad folly of a lumber tariff that preserves the forests of our neighbors and puts a premium upon the destruction of our own.—*St. Paul Pioneer Press.*

TREES AGAIN.

One of the vagaries of the free-traders is the publication of a pamphlet intended to show that the only way to check the destruction of forest trees in the United States is to abolish the duty on foreign lumber; and a scientific periodical, which ought to know better, remarks in commending the argument that the timber duty offers "a direct encouragement to a continued course of ruin." The forests are recklessly destroyed because the people have no adequate sense of their value; and the way to check the destruction, say these economists, is to reduce their value by introducing Canadian timber at a low price. To state their position is to show its absurdity.

If we are not to check the destruction of forests until we have pursuaded people to cease cutting our trees into planks and shingles, and to buy their building material abroad, we may as well abandon the expectation of a change. The abuses to which we ought to direct our attention are reckless waste in wood-cutting, wanton or careless devastation by fire, and the wholesale destruction of forests not for the use of the timber but merely to get rid of it. All these evils, except possible the second, would be aggravated by the repeal of the lumber duty. It is a common practice all over the country to waste the woods in such a manner as to wreak the greatest possible ruin for the least possible result. The axemen who are cutting fuel leave all the fallen trees and broken boughs, and bring down the fresh ones, of which, moreover, they take only the best parts; or they sweep away the young and old growths together, destroying all chance of a renewal of the forest. Perhaps only a few miles away another gang are stripping hemlock bark for the tanneries, and the naked trunks, instead of being turned to use, are left to rot on the ground. As the woodman will only chop in the easiest way, without regard to economy, so the householder will burn nothing but the best firewood, without reflecting upon the cost which he will ultimately have to pay for his extravagance.

Forest fires, which are more frequently the result of criminal recklessness than of accident, ought to be the subject of penal legislation. But closely connected with the frequency of these disasters is the widespread sentiment that woods are like weeds, the natural enemies of the settler which must be exterminated to make way for civilization. There are regions of the United States where the owners of timber offer it gratis to anybody who will cut it and haul it away. Under this system the best parts of the best trees are taken for fuel and the rest is burned on the spot, the fires of course often spreading over miles of valuable standing timber. Thus, in order to hasten the clearing of a few acres for the plough, the landholder destroys one of the most important elements in the productiveness not only of his own farm but of the whole country around. His case is like that of the thriftless cultivator who exhausts his fields by excessive and improper cropping, ruining his future for the sake of a few hundreds of bushels in the present. And the man who wantonly lays waste a forest is worse than the man who exhausts a farm, because the injury is not confined to himself and his heirs but is spread far and wide.

The State will sooner or later find itself forced to consider how it can prevent people from cutting down their own trees. But before any such radical reform as this is attempted we must cultivate the "sentiment of trees," in which a large part of our population seem to be strangely deficient. No important public measure can be carried out until public opinion demands it; and although this question of the preservation of forests is attracting more and more attention every year, there is a huge mass of indifference and ignorance which will long resist any change. To this formidable inert opposition, journalists and economists must patiently address themselves.—*N. Y. Tribune.*

LUMBER RAFTS.

The lumber merchants of Hannibal, Me., employ a novel method of removing lumber from rafts in the Mississippi to their yards. This is usually done by towing the "strings" of which the rafts are composed alongside the shore. The lumber is then washed off by the use of buckets and brooms, and loaded by hand upon wagons which convey it to its proper place for piling in the yards. This method, it will be noticed, necessitates a large amount of manual labor and the occupation of considerable river front in order to handle a large amount of lumber in the season.

The new method calls in the use of the railroad and is operated as follows:—A track is laid along the edge of the water, extending even beyond the low water line. This is heavily ballasted with rock, so that water running over it will have no effect in moving it out of place or floating the ties. At ordinary stages of water, therefore, there is a depth of several feet over the river end of this track. The lumber-raft which it is desired to land is then broken into its "strings," one of which is floated over the line of submerged track and kept in place by a line of guide piles driven for that purpose. This string is again divided into the various cribs composing it, which vary somewhat according to the size of lumber. A train of low, strong flat-cars, built for the purpose, is then run down from the shore, so that one or more of them are under the cribs of the lumber-raft. These cars are of such size that each will take in the length of the crib.

By the proper connections of ropes and stakes a crib is moored over a car, and the movement of the train away from the water by an engine floats the crib also ashore. When in such shallow water that it touches the car, the latter receives its weight, and instead of being floated it is carried shoreward and out of the water. The cribs thus loaded, each on its car, are switched to the yards, which are now some distance from the river, as by using this method they can be. At the yards the lumber is quickly washed off with a hose while being unloaded.

The advantages claimed by this manner of handling lumber are many. There is less obstruction of valuable river front by lumber-rafts; cheaper ground can be used for the lumber yards, as they can be away from the river; the saving in manual labor and teaming is very large, and, lastly, the saving in time is an important item. It is claimed in Hannibal that last year was the first that saw the whole supply of lumber out of the water before winter set in, and this was only possible through use of the method we have described.—*Railway Review.*

EXHAUSTED FORESTS.

The following letter has appeared in the Montreal *Gazette*:—

SIR,—I observe, in the *Gazette*, an article referring to the drive of logs on the Connecticut river, containing 90,000,000 feet, as an evidence that the forests of the east are not completely exhausted, and inferring that years after the time at present allotted by statisticians extracts of similar import may be expected from Michigan papers, and that in the estimates of standing pine no calculation is made for the natural growth of trees, etc.

That the forests of the east are completely exhausted has hardly been claimed, but no better evidence of their scant condition as regards pine could be furnished than on this enormous river, draining such a vast extent of country, which not many years ago was covered by magnificent pine forests, hardly a stick of pine is to be found in the whole 90,000,000, and to obtain this amount of spruce, most of which is to supply mills in Massachusetts and Connecticut, the lumbermen were compelled to go to the headwaters of this river in New Hampshire, within gunshot of the Canadian line, even getting some of it from Canada; in fact, four-fifths of it from the region of the Connecticut lake a section of the country that would not have been in the States at all but for the generosity of Lord Ashburton, who, with that liberality proverbial with those dealing with the property of others, presented it to the United States rather than have any unpleasantness with his friend Webster, for a projection eastward of the northerly line bounding Vermont and Canada would cut off nearly the whole of it.

If this Connecticut river spruce drive of 90,000,000, 40,000,000 of which are old logs, proves anything, it is rather that the eastern states are pretty near the end of their supply, not of pine only, but also of spruce." W. LITTLE.

TIMBER TREATING PROCESSES.

At the National Exposition of Railway Appliances the American Society of Civil Engineers has a large display of specimens of different kinds of wood treated by various processes for divers purposes, in which are included many curiosities, The collection is the result of the labors of a committee appointed to investigate the subject of timber preservation. The conclusions arrived at, after corresponding with 350 persons, examining 104 patents, and collecting a fund of general information, are that out of innumerable methods of preserving timber but few are practical, and only three can be relied upon to prolong the life of wood exposed to the elements, namely: kyanizing, burnettizing, and creosoting. In Europe these methods have passed beyond the domain of experiment, and there produce great economical results. In this country the cheapness of timber has been the principal obstacle to wood preservation, the cost of injecting making the price of cheap woods too high, and consumers have preferred letting the wood rot and renewing it. The committee believe that this condition of affairs is fast being removed by the enhancement in the price of timber, and the proximate exhaustion of the more available forests, the time having probably arrived when the economy and necessity exists in many parts of the country for treating wood against decay in exposed situations. The selection of the proper method to be used depends upon the proposed subsequent exposure of the timber—dry, wet, marine worms, etc.—and the amount of material which the value of the unprepared timber admits of being expended upon it. For bridge and trestle timber, for fences in

dry soil, and generally for wood exposed to the weather, but not to constant moisture, kyanizing—steeping the timber in a solution of corrosive sublimate—may be relied upon. Hemlock was exhibited that was exposed for 40 years at Fort Ontario, Oswego, N. Y., and various kinds of timber that were exposed for 20 years at Lowell, in a sandy soil; while the samples of spruce, from the gate-boxes of the Lowell water works, exposed in various soils for ten years, exhibit the effect of various degrees of moisture, and show that kyanized timber should be kept dry. Kyanizing costs about $6 per thousand feet, board measure. Under favorable circumstances it may be relied on to double or quadruple the life of the more perishable woods. Where and when it will pay to use this method will depend upon the price of the timber and its subsequent exposure.

Burnettizing consists in injecting the timber with a solution of chloride of zinc. It cannot be done successfully unless the wood is first seasoned, either naturally or artificially, to deprive it of moisture, and make room for the solution. This is forced in under pressure in closed cylinders, and is liable to wash out subsequently from the outer layers of the timber, unless retained in some way. For cross-ties, and for timber exposed to weather and moisture, but not in very wet situations, burnettizing is probably, in view of the present price of timber, the most economical method to use. It costs, if well done, about $5 per thousand feet, board measure, or some 20 to 25 cents a tie. It can be done for even less, but the result is not likely to be satisfactory. The hemlock and maple ties exhibited, which have been in use 15 years on the Lehigh & Susquehanna railroad, and the oak tie, 17 years in use on the Erie railway, show the results which may be accomplished. In Germany brunettized fir and beech ties average from 15 to 18 years in the track, and this method has there become the favorite for ties, after extensive trial of all the others. This process should by preference be applied to the cheaper and more open-grained woods. It does not answer so well for bridge ties and timber, as burnettized timber is apt to check and split when dry and exposed to the sun. It will probably not pay to burnettize ties where white oak, or other equally durable woods, can be obtained at 40 or 45 cents a tie, but a recent investigation upon one of the eastern trunk lines, about 1,000 miles long, has established the probability that, with white oak ties at 62 cents each, an annual economy of $250,000 may be expected by burnettizing the hemlock, instead of laying down the oak unprepared.

Creosoting consists in injecting the timber with hot creosote oil under pressure. The mode of application, and necessity for seasoning, are much the same as for burnettizing. For timber in very wet situations, or exposed to marine worms, the best method to use is that of creosoting. It is the most effective, but also the most costly of the various processes. When well done, it costs from $12 to $20 per thousand feet, board measure, or from 50 to 60 cents a tie. It is the favorite method used in England, and is there materially cheaper than here, in consequence of the lesser price of the oil. The English ties exhibited have been from 20 to 22 years in use, and show perfect preservation. Ties and timber creosoted in this country are also shown, but have not had so long an exposure. It is probable they would be thrown out of service, by being cut into by the rail, long before they would decay. Where it will pay to use this process, depends upon a number of local circumstances and prices, which cannot well be enumerated here. It is very good, but costly. There are other substances, such as pyrolignite of iron and sulphate of copper, which have proved fairly effective in preserving timber, but European experience seems to favor most burnettizing and creosoting. The sections of ties exhibited from the Wabash line, and from that of New York, Pennsylvania & Ohio, were prepared by a modification of the sulphate of copper process. The original patents on all the effective processes have long since expired. There are several patented modifications and modes of application, some valuable, and some otherwise, which are still in force. It cannot be too strongly insisted upon, that to be effective the work must be well done. The sap or moisture must be gotten out of the timber, and a sufficient amount of antiseptic put in. If the solution exceeds a certain strength, the wood is rendered brittle and inelastic, so that both skill and honesty are required to accomplish success. —*Northwestern Lumberman.*

CUMBERLAND MOUNTAIN TIMBER.

A correspondent of a southern journal has made a tour over the Cumberland mountains, and tells about the timber he saw. In Monroe county cherry is very abundant, ranging from two to six feet in diameter at the butt, and 60 feet to the first limb. It is difficult to get out and will have to be hauled from one to sixteen miles, and then floated down to a mill site. The benches are not smooth but rocky and rugged. The standing cherry in this county is estimated at from 10,000,000 to 16,000,000 feet. It can be bought very cheap, and the correspondent is of the opinion that a man with money and pluck could make a fortune out of it.

In McMinn, Polk, Bradley, Hamilton, Marion, Franklin and Lincoln counties there is a heavy growth of timber, but little cherry and pine, and these counties have some good logging streams. The poplar is very fine, and most of it is accessible at a reasonable cost. The hickory is straight, long-bodied, free from knots and tough. Franklin county is one of the best of this range, both for choice timber and the ease with which it can be marketed. The mountains in this county are less rocky than in the others, and the benches not so steep, with good points for road-beds. There is hickory enough on a tract of 6,000 acres to pay the state debt, if worked up into awl handles and sold at one cent each. On this tract there are estimated to be 15,000,000 feet of poplar, and it can be bought for $4,000. There is, however, a question as to the title, as there is too much of the land.

One man was cutting butternut and walnut to fence his 10-acre lot, and ash trees, four feet in diameter, were deadened to give his crop sunshine. Small mills, with a capacity of from 2,000 to 4,000 feet per day should be used, as moving often is necessary. The most wonderful mill was found on Robinson creek, in Franklin county. It is very primitive. The mill is made entirely of wood, with the exception of the saws, and was built by George Keller, a 19-year old boy. The mill is driven by three turbine water wheels, all made of wood. The head-blocks are of wood, with wooden ratchets. The sawing is smooth, and the working of the mill would surprise the most credulous.

Mills are being put in operation all along the range of mountains, where a few years ago it was thought out of the question to handle logs In a short time the sombre stillness of this mighty forest, where now only the plaintive call of the lonely owl is heard, will be broken by the busy hum of many saw-mills.—*Northwestern Lumberman.*

Manitoba Shipbuilding.

The following from the Manitoba *Free Press*, of Winnipeg, shows considerable activity in vessel building among the lumbermen of the Canadian Northwest: The Couchiching, a double screw propeller, was launched May 24. She was built by John Short for the Rainy Lake Lumber Company, and is 93 feet in length over all, 18 feet beam, and 7½ feet deep of hold. Mr. Short has two more boats on the stocks, one for Garden & Short, to be 88 feet over all, 16 feet beam, and 6½ feet depth; and the other for W. T. Gibbins, to be 60 feet over all, 12 feet beam, and six feet depth. The Winnipeg Lumber Company has also two boats on the stocks. One is to be 100 feet long, 20 feet beam, and 8 feet depth; the other is for a steam pleasure yacht 50 feet in length.

A MINISTER'S EVIDENCE.—The all prevalent malady of civilized life is Dyspepsia. Rev. W. E. Gifford, of Bothwell, was cured of Dyspepsia and liver complaint that rendered his life almost a burden. The cure was completeed by three bottles of Burdock Blood Bitters.

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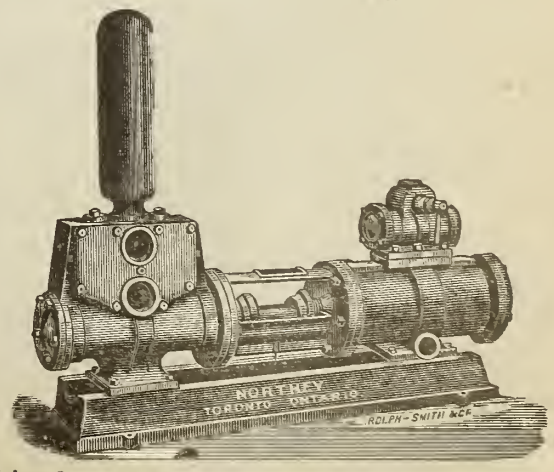

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THE PRESERVATION OF FORESTS AND THEIR ECONOMIC RESULTS.

If any Canadian were asked whether it was a desirable thing to preserve old forests and cultivate new ones, he would without a doubt assent. Strange to say, everybody would agree with him, and yet when we come to apply the proposition with some very practical test, as many votes are found objecting to what ever is advanced to conserve of our forests. Last year an attempt was made in Montreal to awaken public interest by holding a Forestry Congress, which was addressed by many able men, including the ex-Prime Minister of Quebec and the American Commissioner of Agriculture. The instruction which the Congress diffused was valuable and was disseminated over a large area of the country. Whether it will accomplish anything more than the planting of a few thousand trees may be doubted. The subject is becoming serious, and mere individual effort will not be sufficient to meet the requirements of the case. Whatever improvements have been introduced, and however much manufacturers may economise their use of wood, the fact remains that the resources of the country's forests are yearly becoming less. Hitherto the doctrine of private property in land and all that pertains to it has been cherished here and in the United States with a vengeance. It does not seem to have occurred to our legislators that there were other claims upon them than mere socialistic or communistic ones, which merited attention. The theory and practice of all European legislation has long been based on the principle that the State is but the trustee for unborn generations of the human race. There are all sorts of limitations restricting the use of land and its products in France, Germany, Russia and England. Among these are the Agricultural, Mining and Forest laws. The object of these laws is to ensure the largest aggregate production, and to reduce waste to the very smallest limits. The cutting of wood is regulated in such a manner that the area and quantity of wood of forests never becomes less, but rather shows a tendency to increase. The teaching of forestry as a subject of education, is practised just as engineering and chemistry are. Not only so, but France, Germany, Russia and Switzerland have separate schools where forestry is the chief subject of study. In all of these countries, there are, of course, State Forests, without which complete instruction would not be practicable. The schools form a part of a department of forestry presided over by a State Commissioner. The teaching is conducted in intimate connection with the forests. As no statistics are at hand it is impossible to form any correct estimate of the value of the work done by these schools, the number of students turned out, or the precise character of the effect which these schools have had on the conservation of European forests.

We, however, are still young, and our future is all before us; forest land is yet abundant in all the provinces of the Dominion. It is not a very serious matter to urge the appropriation of a sufficient number of acres of forest as a state reserve for the teaching of forestry, and the creation of a fund for its support. Now, there is no need of doing anything in the way of money doles, as a vote of about four townships, or a block of woodland of twelve miles square, would meet all the requirements of the case. An establishment might be begun for twenty students, which would steadily expand to one hundred. Taking the capitalized value of the 92,160 acres at as many dollars, the endowment would be nearly equal to one thousand dollars per head on a hundred students. Worked on the plan of a high timber productive forest, an area equal to 600 acres could be cropped annually. As fast as the wood was harvested the bare places would be rosown for a new crop. Several systems might be adopted by which the relative merits of each plan could be practically tested. Although the land would not perhaps need to be kept under crop for a longer period than 150 years, many portions could be cultivated so as to yield a crop in periods varying from 35 to 120 years. In the course of a generation every part of the plantation would exhibit new crops under growth, and a convention held in a tent in such a forest would speak with an authority greater than any institutions of a smaller character thousands of miles away over oceans. Boys at the forest school would see trees in all stages of growth from one to one hundred and fifty years; they would see operations for keeping the land clean, and the upgrowing crop of trees vigorous, analogous in every respect to the weeding of farm crops. Not only so, they would learn to bear their part in the work, and when in after life they found themselves engaged as lumber merchants or farmers, they would know how to crop and plant land, so as to avoid waste, and increase the revenue of their country. What farm of 100 acres is there that would not be better for having upon it at least four per cent. of wood land which might become the preparatory training ground of the future forester? The value of such little scraps of wood on a prairie soil is great, apart from any direct commercial result from sales of wood. In the hot summer suns cattle love shade; and their influence in the storm and the wind is none less valuable. In the older Canadian settlements a very large percentage of the agricultural land is wooded, and all that is necessary is to preserve by replanting and judicious cutting what remains.

What is needed most is a forest law for every province, for regulating the cutting of timber. Every lumberman should be required to hold a license to cut under well defined conditions of cropping and replanting. The law need not be vexatious either in letter or spirit, but just and liberal in all its provisions. There are even now ample woodlands in Canada, but at the present rate of slaughter they could not remain to us long. Five years' experience would develop an immense amount of interest in the new system. The forests of Quebec might be made to yield a revenue large enough to emancipate her from the enormous burden of debt she carries. In India the revenue in 1870 from forests was £357,000, giving a net income of £52,000, or 14⅝ per cent. In 1880 it was £545,000, with a net revenue of £215,000; that is, the revenue had increased 56 per cent., while the charges increased to only eight per cent. India has 9,820,000 acres of state forest reserved, 2,493,000 acres of which are protected from fire, and from cattle and sheep grazing. They are now in a condition to reproduce themselves under the natural system.

Australia is fully alive to the importance of the subject, for ten years ago an act was passed authorizing the payment of £2 per acre to landowners in certain districts of South Australia to form plantations of trees. In 1875 a Forest Board was constituted, and certain districts of the colony were formerly defined as forest reserves. In 1878 a Forest Act was passed, and a Conservator of Forests was appointed. Last year a quarter of a million trees were planted out, and the forest revenue amounted to £6,517—of which £1,380 was for timber sold—against an expenditure of £6,200. A profit of only £317 is not to be sneered at; it is something that a department of State should pay its way. India did not move in the matter till 1867, and it is only ten years ago that legislation was attempted in South Australia, a colony one-eighth the population of Ontario. Not only do the Forest Department in each case pay their way, but manage to make a revenue. Any one visiting Baden-Baden cannot fail to be struck with the great beauty of the valleys of the Oos and the Murg, and the forests in the immediate neighborhood, which furnish a splendid example of the successful working of forest culture as carried out in Germany. As an example of private forests, which are managed in much the same way, those of Prince Furstenburg, near Rippoldsau, may be mentioned.

Our neighbors the American are waking up to the importance of this matter, and in 1881 Dr. Hough visited the forest schools of Europe, with a view to establishing a similar institution on this side of the Atlantic. We are accustomed to flatter ourselves that we are ahead of the Americans in educational matters and also in public spirit. The Americans have never very seriously disputed the claim, but if the forest country of Canada allows them to take the lead in this matter the claim will certainly not be strengthened. Under any judicious system of management the annual yield of Canadian woods can be increased without any actual restriction on the just rights of any. The soil of a country is not for a generation, nor for a century, but for all that are yet unborn. The theory and practice of all systematic management in Europe is that the annual yield of the forest should represent the earning of the year only, and not any portion of the capital.—*Canadian Manufacturer.*

THE MIDLAND AND LUMBER.

The Orillia *Packett* says that at a special meeting of the Town Council, held on Friday evening, June 8th, the Mayor read the following letter he had received from Mr. Cox, manager of the Midland Railway:—"We have been in communication with the Messrs. R. & G. Strickland in reference to the removal of the Bradford Mills to some point on the Midland. We have suggested to them Orillia, and they have pointed out to us difficulty in bringing logs from the Black River to Lake Couchiching over the Portage Company's tramway. If this difficulty were removed Mr. Strickland says all their timber on the Black River, about 150 million feet, could be brought to Orillia, which would be the best point to manufacture at. They suggest that the town of Orillia, and ourselves ought to take steps to connect Lake St. John with Lake Couchiching, by a canal, which would at once open a water highway for all the productions of the forest on those waters, which are reported to be very extensive. It seems to me that the idea is a good one, and it is strange that Orillia has not taken action in the matter before, instead of allowing all the forest produced to go past them, by way of the Severn River to Georgian Bay; and Muskoka River to Gravenhurst. Messrs. Strickland think, to accomplish this end the outlay would not exceed $30,000. My object in writing is that if you think it advisable, I would meet a committee of your Council, and would invite the Messrs. Strickland to attend, who are now the holders of the Dominion Bank limits, Thompson Smith limits and Hilliard limits, which are all tributary to the Black River, and if the mill was moved to Orillia they would pay out annually from fifty to sixty thousand dollars, and give employment to a large number of men.'

His Worship said he had been speaking of the matter to Mr. Scadding, had told him the mills would be larger than those of the Longford Lumber Company; Orillia would also be made the distributing points for the shanties. In reply to Councillor Miller, he said the Council could grant no aid beyond the corporation limits; but the Council had power to remit taxes for ten years, and, with the sanction of the freeholders, of granting a bonus. Councillor Jupp said the Railway was interested in the matter. The Reeve did not care who was interested, so long as it was for the benefit of the town. He would not vote bonus for anything; but favoured appointing a committee to confer with the applicants as to what encouragement might be given them. It would not be for Mr. Tait to remit taxes to a new enterprise and continue to tax him. Councillor Thompson said the new mill would not interfere with the home market of Mr. Tait, except for slabs, and the latter could not meet the demand for them. It would be better to receive their proposal, before discussing what could be given. Councillors Miller and Mainer thought it would be preferable to have them meet the whole Council, but the other members thought the smaller the committee the better. On the motion of Councillor Thompson and the Reeve, the Mayor was requested to name a committee and communicate their action to Mr. Cox. His Worship named the Reeve, Councillors Miller, McKay, Thompson, and himself.

BI-PRODUCTS OF LUMBER MILLS.

The *Canadian Manufacturer* says:—

"To Messrs. H. B. Rathbun & Sons, of Deseronto, belongs the credit of being the first, in Canada at least, of practically solving the problem of how to utilize the waste from saw mills, and turn the refuse into bi-products that have a marketable value. They have established chemical works adjacent to their mills, and we give a condensed account of the visit of a correspondent of the Napanee *Beaver* to the works:—"It is now admitted these experiments are about to be crowned with success, and that the solution of the important problem of the utilization of waste material has at length been reached. It has been demonstrated that from the sawdust of the big mill can be extracted acetic acid, wood alcohol and tar: that the charcoal can be disposed of for the manufacture of gunpowder, and that as a bi-product, sufficient illuminating gas of an excellent quality can be produced to light the village and its factories. The chemical works are now being enlarged for this purpose, an excavation is being made for a gas-holder and mains, and it is expected that the whole will be in operation early in August. This department is under superintendence, and the whole of the experiments have been conducted by George Walker, formerly of New York." The article on "Bi-products," to be found on front page, treats of many more instances in which so-called refuse matter is capable of utilization, and the subject is one well worthy of consideration."

"Lumber mills have many bi-products which run to waste for want of some cheap and ready mode of converting them into useful and saleable articles. Such are sawdust and shavings. It may be confidently predicted that in the near future uses will be found for all the surplus shavings and sawdust now made. It is only a year or so since car wheels were made of paper mache, and why may not sawdust be so changed by mechanical and chemical manipulation as to become equally useful. A few years ago a great cry was raised at Minneapolis on account of the accumulation of sawdust. Notwithstanding that much has been used for packing, stable bedding and other absorbant purposes, there is a large quantity yet to be utilized. Converted into charcoal by the addition of sulphuric acid, it would be a valuable accessory to the farmer's stable manure heap, as tending to convert the free ammonia of the litter in sulphate, and the charcoal itself has a decided value as a fertilizer."

THE MINNESOTA SITUATION.

St. Paul, Minn., June 4.—The logging situation has not materially changed during the last week for the drivers, and prospects have grown worse rather than better, but the lumbermen do not yet despair of getting some of the logs out that are now reported hung up. The logs are pretty sure to come out of the Rum river, except those on the West Branch and Hillman Branch. The West Branch logs have moved down only about six miles, but heavy rains will bring them all right. The logs are reported hung up on the Willow, at Prairie, Platte and Swan rivers. The local mill owners liable to be most incommoded by the prevailing situation being Merriman, Barrows & Co., and Camp & Walker. The logs which have got out into the main river are moving slowly. A big jam fully four miles long is reported at Aitkin, and another quite unusual is reported at Grand Rapids. There are probably 80,000,000 to 100,000,000 of the whole cut of 500,000,000 that stand a chance of not getting out. There is no apprehension, however, that the crop will not be ample for every demand of the mills. The cut was an unusually large one, and for the present some of the lumbermen are willing that the logs shall be hung up. The sawing season commenced fully three weeks later than a year ago, and even with the aid of three new mills, two of the three thoroughly equipped and capacious mills, the season's cut of lumber does not promise to be larger than a year ago. Logs in the drives tributary to Duluth are hung up still. Before the water grew so low a few millions got out, as follows: On the Nemadji, 5,000,000 to 10,000,000; on the south shore streams, 500,000; on the St. Louis below the rapids, 5,000,000; above the rapids, none. About 15,000,000 have been towed to mills from the north and south shore camps, and more will follow. About 17,500,000 feet are hung up. Advices from the Chippewa River, in Wisconsin, say the general outlook for the drives is about the same as in former years, if anything a trifle better. Most of the drives on the tributaries are hung up, except on the Yellow river, where they are doing fair work and have the run down to within sixty miles of the mouth. There is a lack of water on the Deer Tail, Brule, and north and south forks of the Flambeau. Several of the log-drivers of the St. Croix and its tribu-

taries are undoubtedly hung up for the want of water, and unless there is considerable rain they cannot possibly reach the boom. At present there have been about 125,000,000 feet received in the boom from Pokegema, Groundhouse, Lower Kettle river, Sand Creek, Chicoq Brook, Main St. Croix, and the south fork of the Olam. The Namekagon, Moose, Snake and Crotty Brook logs are running in more or less numbers. *Lumberman's Gazette.*

NOTES ON WARPED WOOD.

It is very often found that wood which in the board or plank is perfectly straight, or appears to be so, will twist and wind in every conceivable manner when cut up into long, narrow lengths, or cross-cut into short, broad panels. When wood is "winding," the only remedy, says *Amateur Mechanics*, is to plane off the high corners and make it true by reducing the thickness; but if it be simply cast (one side hollow and the other round), the defect may be easily got over. If the man, by working on some other portion of his job, can let the defective pieces stand for a day or two, then by placing the wood "hollow side" down on a plane surface, or by putting two such boards one on the top of the other, with the hollow sides facing each other, the wood will draw straight without any more trouble. It is always best, when possible, to work wood in its natural state, as even if the tendency to cast be overcome previous to working it, there is always the probability of its returning to its normal condition. Some men when pressed for time, heat the round side on the stove. This does indeed make the wood straight, but there is a great risk of opening and splitting under this toasting treatment, and this liability is very much increased if the wood be at all shaky. If required the wood can at once be straightened without this risk, by damping the hollow side with water, when the expansion of the fibre on that side pulls it straight. It sometimes happens that a piece of wood of some considerable width, such as a carcase end or a wardrobe panel, has to be reduced from ¾ inch to ½ inch thickness. If this superfluous wood be all taken off one side, that side will become hollow, whereas if it be taken off equally on both sides the wood remains as before. In veneering panels, etc., it is always best to veneer on the outside, that is the side opposite the heart side, the reason for this being that veneer is apt to swell with glue being laid on, and must therefore contract after it is fixed. As the heart side has always a decided tendency to curl, the two forces counteract each other, and the wood remains the same. For this reason, it is always best to inlay on the outside.

CULTIVATION OF TIMBER.

We take the following from the *Builder*:—"How fatal are the results which attend careless indifference on this point is singlarly shown by what has followed in Italy on the disforesting of the once well-wooded peninsula. Not alone have the recent terrible inundations in the north of Italy been directly traced to this cause, but the fatal *aria cattiva*, the poisonous breath of the marsh lands, which has within twenty years or so invaded almost every province of the peninsula, now reigns supreme, driving from the once fertile plains thousands of the unhappy inhabitants. Here we see the direct influence of false economy in this one direction. When we consider, in addition, that Italy could undoubtedly, by proper management, grow a large portion of the timber which at present she has to import, we see another direction in which a false economy has impoverished and impoverishes an already poor nation. England, without having reached this sad position, cannot be said to be beyond blame. There exists in our country many a broad stretch of land which, by the action of science, might be rendered productive, and at the same time beautiful. The growth of timber is not of a nature to tempt the speculative demands of modern private initiative; it is for this reason that it behoves the Government, or at least, local authorities, to take up the question. They, at least, standing virtually independent of the consideration of immediate gain, are the only fit instruments by which such work can be done; but the system once set in order, the returns, it is evident, will be no less regular, even more so than from the ordinary sources of profit. A close study of the matter—an enquiry into the admirable methods adopted on the continent, in France, in Belgium, and in Germany—would form an interesting subject of enquiry either for some Government commission or for some privately appointed body. The question is one of something more than passing interest. Whence are we to obtain our supply of timber? Nature unaided will soon cease to be able to satisfy our demands; but we have here another of the many instances where science intelligently directed can solve the difficulty, and thus once again be of the utmost service to the world, not alone practically, but æsthetically."

REMARKABLE VIADUCTS.

What will be the highest viaduct in the New World is the one now being made (and near completion) for the New York, Lake Erie & Western Railroad over the Kinzua Creek, four miles from Alton, in McKean county, at a height of 2,100 feet above the sea level. This work, designed by Messrs. Barnes & Pugsley, will have a total length of 2,051 feet between the abutments, and a height of 301 feet between the level of the rail and the bed of the river. The line is supported on twenty straight piers of wrought iron work, 61 feet apart, The construction requires nearly 4,000,000 pounds of iron, and 7,000 yards of masonry, and the cost is about $300,000. This bridge, exceeding by sixty feet in height the Niagara Suspension Bridge, and by forty-five feet the Portgage railroad bridge, was recently stated by the *Scientific American* to be "the highest in the world." But this title rightly belongs to the railway viaduct of Garabit, in France, now being erected over a river. The locality is in the department of Cantal. This bridge, planned by MM. Banby & Boyer, and constructed by M. Eiffel, has a total length of 565 metress (say 1,880 feet) and near the middle of the great centre arch (which is the most remakable feature) the height from the bed of the river to the rail is 124 metress, or 413 feet. A good idea of the height is given in *La Nature*, where it is shown that Notre Dame with the Vendome colum placed on the top of its towers would clear the arch. The viaduct was begun in 1881, and it is to be completed next year. It is estimated to cost about 3,000,000 francs.

Two Cribs Broken Up.

MONTREAL, June 12.—In the gale yesterday afternoon, two cribs of Messrs. Calvin & Son's rafts were just descending the Lachine Rapids, and it was only with the greatest exertion the rafts were navigated through the dangerous channels of the rapids. On arriving opposite Nun's Island, however, the wind increased in force and most of the cribs comprising the rafts were blown considerably out of their course, several nearly going ashore on St. Helen's Island. Two of the cribs became unmanageable just above the Victoria bridge and swinging with the current were thrown against the piers of the bridge and broken up. The crash each time is said by the raftsmen to have been tremendous, all of the timbers being separated, and the men, of whom there were about a dozen on each crib were thrown into the water and had a hard struggle for their lives before being rescued.

WHAT EVERY PERSON SHOULD KNOW.—The grand outlets of disease from the system are the Skin, the Bowels, and the Kidneys. Burdock Blood Bitters is the most safe, pleasant, and effectual purifier and health-restoring tonic in the world. Trial bottles 10 cents.

Advice to Mothers.

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PETERBOROUGH, Ont. JULY 2, 1883.

RECENTLY 8,000 cedar logs were seized by the United States officials, at Newport, Arkansas, on the charge of having been cut from government land.

THE Erie Car Works, at Erie, Pa., have one of the largest stocks of seasoned lumber on hand ever collected in this country, and are now very busy turning out cars on orders.

THE automatic fire sprinkler is becoming very popular among furniture manufacturers and other wood-workers in the United States. The Grand Rapids, Mich., furniture factories are reported to bo equipping themselves with the device.

THE Brandon correspondent of the Winnipeg *Commercial* of June 19th says :—Owing to the difficulty in driving logs down the river from the limits, Loacock's saw mill is still idle. For the same reason Mr. Grigg is not pushing his mill forward as rapidly as he would have done.

THE scarcity of timber at Darien is becoming a very serious matter with those manufacturers who have contracts and are obliged to meet the extreme prices demanded for that which offers. There have been sales at prices equivalent to $20 for 1,200 feet average, a figure not before touched in years.

THE accumulation of sawdust in St. John river, New Brunswick, has become so serious a matter that it threatens to obstruct navigation for large vessels passing up to Fredericton, and a local paper calls upon the authorities to enforce the law against allowing dust from the mills to fall into the stream.

THE *Wood-Worker* says :—The band saw mill is evidently the mill of the future where valuable hardwoods are to be cut. Even now the novelty of this style of mill has almost worn off, and they are being set up in nearly every part of the country. That this mill is looked upon as the coming mill is evidenced by the fact that there are not less than half a dozen prominent machinery builders who have recently brought them out, or are preparing to.

A WRITER in an exchange is correct when he says that : "In buying wood-working machinery, the very best rule for guidance is that old one 'the best is the cheapest.' It don't pay to buy cheap materials or cheap workmanship, and cheap machines generally mean both of these. Cheapness is apt to prove an expensive investment in the long run."

THE Bobcaygeon *Independent* of June 22nd, says :—The first drive of the season has passed through, under the command of Mr. Frank Bell. The drive contains 28,000 logs, which were cut in the township of Anson and the neighborhood of Minden. Mr. Bell is noted for his quick runs, and is this year two weeks earlier than usual.

THE *N. Y. Timber Trades Review* says :—At Chapman's shovel handle factory, Oxford, Me., they turn out about 150 dozen handles per day when in full blast ; use all the ash they can get —from 150,000 to 300,000 feet a year. All their handles have gone to the same man for fifteen years, Jones, of Gananoque, Ontario. They saw out about 400,000 shingles this season.

DURING the last few years a number Mobile, Ala, saw mills have gone into the box making business, or rather, have made it a branch of their business. This branch has increased to enormous proportions ; so that now it gives work to several hundred men. The boxes are chiefly for the shipment of early vegetables and fruits.

FURSTENFELD, Germany, boasts of the oldest tree in that country. It is a huge Linden, believed to be 1,000 years old, growing at the back of the village church, in the midst of the tombs of two centuries. Its trunk is fully fifteen feet in diameter, and its twisted branches stretch out far and wide, seemingly covering the entire inclosure. It is still growing, and is one of the sights of that section of Germany.

SOME of the loggers in white cedar timber on South Slouth, Coos county, Oregon, have adopted a new mode of getting the timber to market. The logs are hewn into square pieces from six to twenty feet in length and not less than six by six inches, in the woods, and hauled to the landing where they ship them up the bay on lighters and thence to San Francisco. They receive $20 per thousand feet for these pieces on the wharf at Empire.

A STURGEON Bay, Wis., paper says that Chicago commission men, who buy railroad ties in Door county, are getting very particular as to how ties are made. They will not receive any, even on contract, that are not eight feet long' six inches face and sawed at both ends ; otherwise they are culled. One shipper who had 4,000 ties to deliver on contract was obliged to set men to sawing off the ends at a cost of two cents each stick—something that he did not expect when the contract was made.

THE Winnipeg *Commercial* of June 19, says : The saw mills have not much more than fairly got to work, and as the demand is lighter than was anticipated they are not running so strong as they otherwise would. An immense amount of lumber is reported as on the way to this market, via Port Arthur, which will tend to make business in the lumber line quieter. The furniture factories are kept going pretty well. There cannot be said to be any particlar rush, but still a healthy trade is being done.

THE cases in which plug tobacco is packed are made almost entirely of sycamore. This wood is valuable for this purpose, as it will not impart any smell or taste to the tobacco and as it will not absorb moisture readily. This appears to be about the only use which can be made of sycamore lumber, which has the very serious defect of warping badly. Were it not for this, it would be a valuable wood for many purposes, as the lumber is large and clear of knots, and there are very large amounts of it in Ohio, Indiana and Kentucky. Perhaps, in the future, some sure method of so treating lumber that it will not warp will be devised, but until then then sycamore will be useless for building purposes.

THE *Northwestern Lumberman* says :—The most cheerful notes come from Ohio, Indiana and the new Northwest. In the two older states there is an era of improvement in town and country, and new buildings are requiring a large amount of lumber. There are exceptions to this general rule, to be sure, but generally Ohio and Indiana are very prosperous. The progress of new settlements in western Minnesota, Dakota, western Iowa and Nebraska is calling for a heavy volume of lumber, and the Wisconsin and Minnesota lumbermen are reaping the advantage of it, to a greater extent than the trade here. The railroad mills in Wisconsin are particularly busy supplying the western demand.

THE Halifax *New Era* says :—The market during the week has been quiet and slack in all kinds of lumber. There have been very few arrivals and no exports except a few thousand feet to the West Indies as deck loads. No new orders have been received and there is apparently no demand in any market. Prices are weak at our quotations and unless some change in the demand speedily transpires prices must decline —especially for the lower grades for which this market has become a general rendezvous, owing to the fact that we have no official inspector or surveyor of lumber. In consequence we are the recipients of such lumber and shingles as other markets would reject. We are convinced that it would be to the advantage of the public if some rule were established by which our lumber interests—no unimportant item in our revenue—should be placed under proper management.

IN reference to the statement, in our Toronto correspondence in last issue, that lumber for Parkdale, carried by the Midland Railway, was charged $5.00 per car load, extra, by the G. T. R. R. and C. V. R. R., and that serious delays occurred between Toronto and Parkdale, it is gratfying to learn that as soon as Mr. White, traffic manager of the Midland Railway became aware of the state of affairs he proceeded to Toronto, and made arrangements which will enable dealers in Parkdale to receive lumber, etc., over any portion of the Midland system at the same price per car load as dealers do in Toronto. As far as the excess referred to of loading over the standard weight per car load is concerned, shippers should abide by the acknowledged and contract standard. The management of the Midland Railway has never been considered shabby in this matter, where only a few hundred feet extra were concerned, but when the excess swells over a thousand feet, it becomes too much of a burden to be carried without challenge. Shippers must admit that there should be a limit somewhere. As to the question of the rate from Midland to Toronto those interested should interview the Midland Railway authorities and state their case.

SIMCOE, ONT.

To the Editor of the Canada Lumberman.

SIR,—The lumber trade in this county is booming, and we are sawing five millions, be sides supplying 50,000 white oak railway ties to the Great Western division of the Grand Trunk. London, St. Thomas, Woodstock and Toronto take most of our lumber. Toronto takes hardwood, and we send long pine and oak bill stuff to Buffalo. There are still twenty to twenty-five millions per year made in this county, but a few years will exhaust it. The small second growth, eight to fifteen inches on the stump is being cut now.

Yours, &c.,
A. McCALL.

Simcoe, Ont., June 22, 1883.

MILL REFUSE.

It will be remembered that some months ago the village of Plattsburg, N. Y., brought a suit in the New York state supreme court to enjoin Chauncy and Benton Turner, owners of a large mill at that place, from allowing sawdust to fall into the Sarauac river. It was charged in the complaint that the mouth of the river, which was once a clear stream, was choked with sawdust, which generated a foul gas, arrested the outflow of sewage, and befouled the river within the corporate limits, thus endangering health. The referee has decided that the plaintiff is entitled to a decree, perpetually restraining and enjoining the defendants, their agents, etc., from suffering or permitting to fall into said river at their mill any sawdust or refuse matter, and judgment was accordingly directed in favor of the plaintiff with costs. The Turners will, therefore, hereafter have to provide themselves with a refuse burner, or, what would be better, with a chemical works attachment, like Rathbun & Sons, of Deseronto, Ont., by which the refuse could be converted into articles of commerce at a profit.—*Northwestern Lumberman.*

WERE THE PLAINS ONCE TIMBERED ?

This has been a question of no little speculation and comment, and we now come forward with additional "points" on the subject. Last week we were out with a survey party in town 27—2 east. The land was undulating, composed of gravelly loam with a noticeable admixture of clay. The numerous brooks had clay banks with stony and gravelly bottoms. Timber beech, sugar, maple, and large hemlocks, with an occasional birch, white ash, ironwood, etc. Forty-four years ago the United States survey found the same land "third rate, timbered with poplar, birch, hemlock, etc." Three-fourth of the monuments erected by the United States survey were upon poplars from 6 to 10 inches in diameter. In a straight run of five miles we found but one poplar, and that was a gigantic dry stub nearly thirty inches in diameter. We imply from this that the character of the timber has changed with the past forty years, and now we will prove it. (1) The beeches and maples are young,—averaging not more than 8 or 10 inches in diameter in this particular locality. (2) The hemlocks are of monstrous size,—36 inches and over. (3) All the large hemlocks are either hollow or very shaky, while very many are dead. (4) Brooks 4 links wide and larger were found where none existed 44 years ago. (5) Further to the north and upon the same soil with a decided admixture of clay, we found a plain covered with a dense growth of poplar and birch with some Norway pine and spruce pine, all of not more than five years growth, with some soft maple, cherry and iron wood sprouts. A few young spruce pines yet seemed to hold nominal possession, while the blackened stubs of the once gigantic white and yellow pine give the remainder of the history written by fire. (6) The spruce pine will withstand a considerable amount of fire without injury, as attested everywhere by their blackened and charred trunks and green tops. Fire seems absolutely necessary for the germination of its seeds, which by the hundreds of bushels lie in the soil of the plains until a fire sweeps over it at the proper season of the year, when the trees spring up in abundance. We have seen places so thickly covered with spruce pines not more than three feet high that at a short distance it resembles a field of wheat.

What, then, is the history of the plain which we saw covered with poplar and birch ? Many years ago it was a forest. Within the last 15 years the land has been denuded of timber by frequent fires.

What will be its future ? Should fire not interfere, the poplar and birches will grow in 75 years to forest trees, the maple, ash and ironwood sprouts will grow likewise and become more numerous.

Poplar almost invariably dies at the end of this time, and birch is always crowded out and killed by other timber except in spots peculiarly adopted to its growth. In 50 years more the maple, beech, linden, etc., will have gained the ascendancy, and for the next two hundred years we will see a magnificent forest, where was once a parched and barren plain. It has taken hundreds of years to make this change, but it has nevertheless taken place.

Suppose that at irregular intervals of from two to ten years fire continues to sweep over this place. It licks from the hills the scanty deposit of molud from the falling leaves, and digs deep into the peaty soil of the swamps.

Death and desolation seem to reign supreme, but the spruce raises its head defiantly and thrives amid such scenes. The stumps of the charred oaks send up shrubby sprouts that struggle on until the next fire lays them low. The resin dropped from the trunk and limbs of the pine, and the dried grass feed a future con-

flagration. The potash and other soluble elements left in the form of ashes are washed away by the passing shower, and under the reign of fire the vegetable elements of plant nutrition disappear, and a waste is left covered sparingly with spruce pine, while stunted moss ineffectually endeavors to hide the barren soil, and prepare the way for higher forms of vegetation. Although a greater portion of the so called plains of northern Michigan is covered by a thick sward of hardy grass and herbs, we have seen knolls of hard clay as well as light sand covered with scarcely anything but this moss, showing that the character of the earthy or mineral portion of the soil has nothing to do with this condition. The reclaiming and successful cultivation of a large share of the plains is no longer an experiment but an established fact, but from what we have noted above it follows that every square foot even of the poorest of this once supposed desert will become of service to the agriculturist, and that at no distant day.—*Oscoda County Mail.*

CINCHONA CULTURE IN GUATEMALA.

President Barrios of Guatemala has made arrangements to try the experiment of cultivating the cinchona tree, and Mr. W. J. Forsyth, a planter of Ceylon, who has ridden a thousand miles through Central America, exploring the country to discover the best site for the plantation, is now in this city on his return to East India to select the seed for 5,000,000 trees. Speaking on the subject, Mr. Forsyth said: "The rapid increase in the number of uses to which the bark of the cinchona tree is put, not only for the manufacture of quinine and an ingredient in the substitute for hops, but for various commercial purposes, induced President Barris to try this experiment. Although the cinchona tree is not a native of India, but was introduced there in 1879 by the celebrated botanist Clement Markham, at the instance of the British Government, the culture was so profitable that not only has the original investment of £150,000 been repaid, but the trees have been valued at £1,000,000. There are many varieties of the cinchona. One is the Legeriana calisaya, which is rich in alkaloid. Another variety is the officinalis, the bark of which is known as crown bark. Other varities are condamanca and the succirubra. The last named is rather larger than the others and more robust and of quicker growth, but not so rich in alkaloid, though it yields plenty of bark. These barks are generally known to commerce as Peruvian bark, though not cultivated in Peru nor grown there to any great extent. The trees are planted from three to four feet apart, the mature in about six years.

There are three methods of treatment in cultivation. One is by thinning out, or selecting the largest trees to be retained. Another is by coppicing, which is simply cutttng the tree down to a stump and permitting the shoots to grow. At the harvest the shoots are cut off. The third method is called the Melver system. and consists in taking the bark from a part of the matured tree and mossing over the stripped place until the bark is renewed. If the mossing is carefully done the bark will renew itself continually. The bark is sold at 2s to 13s a pound, and is sold readily, for the supply has never yet been too great.

"The cinchona trec requires a tropical climate and a plentiful rainfall. It would not grow in the United States, but can be cultivated in Mexico. The trees require careful cultivation. President Barris gave me every faculty to explore the country, and he has great hopes of the success of the experiment in utilizing the vast amount of soil in Central America not now under cultivation. They raise coffee there for export, but their methods of cultivation are crude. Fortunately the deseases of the coffee plant which make the culture so precarious in India do not appear in Central America."

NEW USES FOR WOOD.

It does not seem safe nor wise, now, to declare any kind of tree worthless. Even the despised basswood and cottonwood trees have become valuable. It may be, the so called good-for-nothing sage bush, which covers the bad lands of the western states and territories will be found to possess some valuable properties, and then it will be elevated to a place among the now valuable trees. "Late inventions and discoveries have revealed the fact that the finest polish and strongest household furniture can be made out of paper. It can be pressed so hard that no instrument short of a diamond can scratch it—and it can be given the finest shades in imitation of wood, and produced cheaper than walnut, mahogany or ebony. And late discoveries in paper-making established the fact that cottonwood makes the whitest and strongest fibre pulp yet manufactured out of wood. There are vast quantities of pulp imported, and some newspaper men are clamoring for it being done free of duty. Paper mills in Delaware, Pennsylvania, and other northern states are shipping thousands of cords of poplar wood from Chowan river in North Carolina, one mill in Delaware contracting for 30,000 cords. This is costly, and shows conclusively that our rich lands, where cottonwood grows so luxuriantly and of which in many cases the black walnut has been denuded to make furniture in England, may yet become profitable fields to raise and manufacture paper furniture, car wheels, and houses. Something has to take the place of pine, walnut and cherry in house-building and ornamental wood-work, and the probability now is that the cottonwood is the coming tree. It is easier propagated, a more rapid grower, is exempt from enemies and parasites, and is a native almost everywhere. Forestrymen have troubled themselves about the future timber to supply the industrial pursuits. The best of car-wheels are made of paper, which stand the weather and wear longer than iron, and are less liable to accidents from breaking. If they will stand in this most difficult trial, paper can certainly be used in almost any place. And if it can best be made of cottonwood pulp, who doubts that this abused and derided tree is bound to come to the front and yet become one of the most popular timbers for tree cultivation."—*Iowa State Register.*

WOODS LIFE IN MAINE.

Says the *Bangor Whig*:—"An interesting souvenir comes from the lumber woods of the north, in the form of a communication written very lengthy on a fine sheet of birch bark, and incased in an envelope composed of the same material. The letter is dated Mattamiscontis, No. 2, range 7, about 15 miles from any settlement, in a lumber camp where Mr. John McGregor has a crew of men engaged in cutting spool wood for his factory. The writer gives some idea of how men live in a lumber camp: "Our camp is built of rough logs of poplar, laid up on the sides about four feet, and running up to a pitch in the centre of about 10 feet. The roof is covered with cedar splints four feet long and laid the same as shingles, making a very good covering, though not very tight. The floor is made of poles laid on the ground. We have two stoves, one a large heater, three feet long, and the other a cooking stove. For sleeping apartments we have a berth made the length of the camp, which is 19½ feet, and accommodates 14 men. In front of this and on a range with the stove is the 'deacon seat,' of the same length as the camp. Our living consists of pork and beans, bread and cookies, ginger bread and old-fashioned doughnuts, dried apples, beef, codfish, mackerel, tea, and molasses. For breakfast we have pork and beans hot from the oven, with ginger-bread, cookies, and tea. For dinner, which is eaten in the woods, we have beans, doughnuts and bread, with tea, and occasionally beef. For supper we have codfish or mackerel and potatoes, with fried pork. We get any amount of fresh perch and pickerel close by the camp, in Mattamiscontis lake. Fish forms a prominent item in our diet."

THE PAPER CRANK.

The *Northwestern Lumberman* says:—The paper crank seems more energetic with the approach of warm weather. In the direction of paper there is nothing that he is not anxious to do except to tell the truth. He carries his theories to a ridiculous extreme, often failing to temper them with practicability. The paper tie man, who claims so much for his own hobby, is quoted as remarking:—

"Almost anything can now be made of paper. A paper ball can now be made so solid that nothing can indent it but a diamond tool. Car wheels are now made of paper. Its strength is astonishing. You can suspend 339 pounds from a Bank of England note and it will not part. Bath-tubs, pots, plates, knives, forks, cooking stoves, printing-presses, steam engines and chimneys are made of paper nowadays, and there is absolutely no limit to the uses to which it may be put."

A part of this statemcnt any observant reader would be ready to admit, but the rest of it is sheer nonsense. Car wheels are not made of paper, but paper is an element of their construction. It is sandwiched between iron plates, and enclosed with a tire, being also securely bolted in position. It is not a wheel—it is the filling. The mythology about pa per stoves. printing-presses, steam engines, *ad libitum*, may be thrilling literature, but the paper crank cannot produce the originals. The *Lumberman* never expects to be printed on a paste-board press, nor to eat bread baked in a papier mache oven. To construct a non-explosive steam boiler out of paper plate is also a refreshing suggestion. Probably the chemical combination of paper with other materials will result in producing a large number of articles that will have a practical utility, but the range of that utility must be limited to something. It is not at all likely that paper can be made an entire substitute for wood, iron, stone, coal, and other minerals, but this is a claim by no means too aspiring for the paper crank to make.

MONTREAL NOTES.

The *Gazette* of June 22nd says:—As regards the local trade, we have not much to report during the week, the only change of importance being the advance of 50c. per M in laths, sales having been made at $2 on account of the improved demand and scarcity of stocks. A moderate trade only is reported in hard and soft wood. Very little dry wood is now to be had, and the new supplies being green there is scarcely any call for it. As regards the export trade, the shipments of deals from this port have already been about double those of the corresponding period of last year. There is very little doing in lumber on River Plate account. In freights a small vessel has been chartered at 67s. 6d. for East of England coast.

The Great Northwest.

The great increase in travel to the Northwest, has forced the "Famous Albert Lea Route" to put upon its line magnificent dining cars, in which passengers will be served meals second in quality to no first-class hotel, for the small sum of seventy-five cents each.

The Chicago, Rock Island & Pacific Railway, which controls this route, has always maintained a reputation for giving travellers first-class meals on its dining cars, and in putting on this line the same class of cars, it fills a want that the travelling public will appreciate.

"The Albert Lea Route," is carrying a very large share of the Northwestern travel, and, although early in the season, has commenced to sell tourists' tickets to the various pleasure resorts in a volume sufficiently large to guarantee an immense summer traffic.

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The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings through piling Grounds connected with main line of Canada Pacific Railway. The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waba Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, Seigneurs Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

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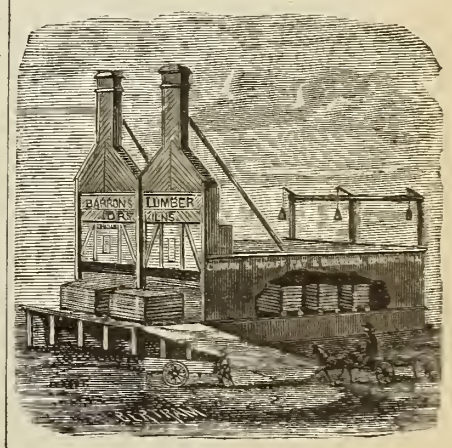

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NORWEGIAN BUILDING.

Our contemporary, the *Builder*, recently gave an interestering article on the Norwegian style of building, from which we quote the following extracts :—"Having seen other countries of a more advanced culture than their own," says the writer, Mr. P. Lowzow, "the taste for the beautiful was comparatively early awakened, resulting in a desire to give shape and form to their thoughts and ideas, which was most successfully carried out in the well-known and characteristic art of Norwegian wood-carving. Owing to the imperfect implements and tools of that age, the granite was too hard and difficult a material for building and ornamental purposes, and the large forests had to render the necessary material instead. In the time of the Vikings Norway could scarcely boast of any architecture. Their dwelling were plain, generally consisting of but one large room with an earthen floor, in the middle of which they built a rude fireplace, and made a hole in the roof to allow the smoke to escape. It was their ships that they first attempted to beautify with ornaments, and here their fancy had free scope.

"After the introduction of Christianity, about the year 1,000, a more developed state of society was established. The first church was built in A. D. 996 of timber, on the same spot where now stands the celebrated Trondhjems Cathedral. During the long struggle between Christainity and heathenism, no progress was made in the building of churches, and the second church was not finished until 1,050. This church was, however, built of stone. About this time Norwegian wood-carving made considerable progress, and many of the timber churches were decorated with ornaments of this kind. In these early wooden churches the walls were constructed by the timber being raised on its ends ; the outsides was covered with deals to protect the inmates against the great cold. The nave was supported by wooden pillars, and rose considerably above the side aisles.

"Of these ancient and interesting structures there are still a few preserved, of which the churches in Borgund and Hitterdal are well known to tourists in Norway. At the same time, considerable progress was made in the architecture of dwelling houses, &c. Each building had its separate use. The number of rooms increased, and they were now provided with wooden floors. It is only within the last century or two that two storied houses have come into use, and are now rapidly supplanting the old ones. During the last centuries little or no attention has been paid to the ancient Norwegian architecture in the construction of new houses ; but it is a pleasure to report that during the last thirty or forty years a great revival has taken place. Many Norwegian architects have done great service in re-introducing the old Norwegian style, in which many new buildings have now been built and decorated, and Norway will again respect and appreciate its old timber architecture.

"In considering the later and more modern architecture, we must strictly distinguish between the town and the country. In the town the houses are built on the system of flats, and are usually either three or four stores high. Brick is now by law the material for building in town, and nearly all the houses are plastered with cement as a protection against cold and rain. The last fifty years have also developed a stucco architecture, which gives the broad streets and the houses a bright and clean appearance. But in the country timber architecture is still used for churches and dwelling houses. The plan of the residence is, as a rule, simple. In the middle of the house a lobby or small hall is arranged, which forms the means of communication between the rooms arranged around this. As the price of timber is cheap, and rates of wages low, we find, as a rule, that the houses are built larger than required for actual use. Easy access is obtained between the different rooms through doors leading direct from one room to another to avoid the cold air in the lobby. Thus a suite of rooms is obtained, which is found to be very convenient and comfortable. Carpets are seldom used, but the floors are painted and varnished, wainscoting is arranged in the best rooms, and the walls are covered with deals, which is painted or covered with painted canvas. The ornamentation and decoration of the houses outside are obtained through the projecting head-pieces of beams, the projecting roofs, and the elegant open verandahs.

"The present design of a Norwegian modern timber-house presents a large and more than usually comfortably arranged residence in the country. One now is in course of erection at Osterdalen will form the main building in a large group of houses. The floor will be fitted with English tiles to harmonize with the high wainscoting and the painted ceiling. In one of the broken corners of the large parlour is an open fireplace for use in the mild weather in the spring, and in the other a stove for the severe cold in the winter. Wainscoting of wood is arranged here as in the other rooms, and the ceilings are of ornamental woedwork. In the dining-room the side-board is constructed in the wall, which has a small opening through which the dishes are passed direct from the kitchen.

"The house is entirely built of 7 in. timber, outside and inside, covered by deals to resist the cold, which a well-built timber house fully does. The floor beams of the first floor project, after old Norwegian custom, 12 in. out over the ground floor, and support the upper walls. Through this, variation and ornamentation are produced in the elevation, giving the exterior a striking appearance. The high pointed arches of the verandahs under the projecting roofs assist also in this, and thus depth and a fine variety of light and shade are obtained. As a rule, the Norwegian timber houses are light and elegant, and produce by their warm and bright color an attractive appearance. At the same time, they are strong and cheap. The price of the timber is low, and the rates of wages are low, so it is possible even for people not so well off to inhabit a good and handsome house. For this reason," says Mr. Lowzow, "I recommend these timber houses for use in England, to have the houses built in Norway and sent here by steamer, where they can be easily re-erected. The total cost of a timber-house will favorably compare with the cost of a brick house, besides being a much more healthy and comfortable abode."

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on June 2nd, says :—The weather still continues favourable for the loading of the spring fleet, and the first batch of ships, with a few steamers, have already sailed, and as winds have been favorable for good passages, vessels will be commencing to drop in rapidly on your side by the time this reaches your readers. An average tonnage of ships seemed to have arrived at Skutskar, Sundswall and the Angerman River, but the arrivals to date at Gefle, Soderhamn and Hudikswall districts are considerably under the tonnage of last season. The diminution in large steamer cargoes to London, Hull, &c., accounts for the reduction in tonnage.

I mentioned a month ago that a reduction of 20 per cent. in the number of logs cut last winter in the Sundswall and Hernosand districts, as compared with the output of the two previous seasons, was the generally received opinion of the producers, and from further inquiries made have no reason to alter the figure given, which, in my opinion, is within the mark. I have also had reports from the Gefle district, to the effect that the diminution in the get of logs last winter, as compared to winter 1881-82, is equal to a total of 13,000 standards of sawn wood in the case of the large companies alone, while a reduction of 30 per cent. in the case of the smaller concerns is well under the reality. I hope to give you the result of observations in the Ljusne and Soderhamn districts in a subsequent letter.

Floating operations have been prosecuted with a fair amount of success during the last three weeks, but complaints are now rife of want of water in the smaller streams, and without being a pessimist, it is quite clear that the present season will be a much worse one than the last in a "floating" sense. It is asserted that the reserve of snow on the mountains is much less in proportion than what fell on the coast last winter, and consequently that the so-called "fell flood" will be less in volume and of shorter duration than usual. Be this as it may, there is little doubt but that the certainty of a smaller supply of logs than last year, in conjunction with the late spring, has already exercised a curbing influence on the production, which will, in all probability, be some 70,000 standards under 1882 for the district north of Dal River.

At the late meeting of the Hudikswalls Travaru Aktiebolag, a dividend of 10 per cent. was declared for 1882, and a considerable amount carried to reserve. The position of the concern in question has much improved of late years and it now takes a high rank amongst similar establishments. The profits of most of the other large saw-mill companies in Sweden were last year very satisfactory, and altogether it was one of the best seasons the trade have had. This year the result will be much less favorable, not only for producers, but for the middlemen, both on your side and this. At least one English firm of the latter description *speculated* very heavily last autumn.

A SAWYER ON SAWS.

Having served in the capacity of sawyer for a number of years, says J. G. Kinder, in the *Artisan*, of Cincinnati, I have naturally arrived at certain conclusions, some of them at variance with those generally accepted. First, I have no use for end-play in a saw-mandrel : would like for some one to give a good reason why he considers end-play of any use. I have no use for a slotted saw. No one contends that a slotted saw will make better lumber than a solid saw, if the latter is cool. I have no use for a hot saw. When it gets hot, better put the slot in the filer—that is where the trouble lies. I have no use for inserted toothed saws. Have seen a good many fancy kinds of saws, and from the immense quantity of profanity they have caused to be thrown on an unprotected atmosphere, I get my solution of the cause of the great cyclones in the west in recent years ; and I am pretty certain that it is some new wrinkle that I have not heard of that is causing, in pretty much the same way, high waters, Wiggins' storms, etc.

I have no theories to advance against their use. I only feel that a solid toothed saw is good enough for me ; and there is no tool made on earth, to my eye, that is as pleasant to look at as a circular saw with that keen, whistling cut, wading through big knotty logs, and standing up to the work like a giant. Every sawyer, I presume, has certain little peculiar ways of managing saws. I have only one crotchet of my own that I will make particular mention of, and I will give your readers the benefit of it, provided, by trying it, they will find it a benefit.

It is pretty clear to me that, no matter how true a saw will run when sharp, you can not always keep them just that sharp, and they are inclined to waver to one side or the other, and this tendency must be overcome with the guides. Now, I file my saw with a very slight inclination to the board ; in running, the saw bears slightly but invariably to the inside guide pin. As the saw gets duller, it may incline to cut the board slightly scant. By screwing up the inside guide this tendency will be overcome ; and if the saw becomes very dull it may heat at rim, which is a very good sign to file. Now if the saw, instead of having tendency to the board, was inclined to the log, as it became duller, the outside guide pin must be screwed up to overcome this tendency as in the other case, but with the most serious consequenses : because you are only forcing the edge of saw temporarily out of its true line, and not the collar or middle of the saw, as there is only about one-sixteenth of an inch clearance for log past centre of saw. And if, in order to make the saw stand up to the work, you have guided the edge one-eighth of an inch out of its true place, it brings the log right against the saw. About this time you will see some blue smoke coming out of the cut, be sending a man to the pond after water to cool the saw, and in a short time will find that some artist has painted in fast colors several little patches of sky-blue scenery all around the collar of saw ; after which comes the time for the scientific filer to step in, for I claim it takes very little science to run a true saw. But when you have a kinked saw, from heating at the collar or otherwise, then it does take a scienced hand to control it ; there is no rule I known of to control an untrue saw, only the general one for a filer to put a kink in his filling to suit the kink in his saw. The better plan would be to have both saw and sawyer hammered.

SAWDUST.

Mention was made in these columns recently of cork brick, which are light, strong and sound-proof. The *American Architect* suggests that a similar concrete might be made of sawdust, and if the sawdust could be furnished cheaply (in Boston) it is of opinion that such a concrete would probably find an extensive application, deafening floors and partitions, casing water pipes and furring brick walls. If sawdust costs too much for concrete in Boston, it certainly does not at northwestern lumber producing points ; and the cost of transportation of sawdust brick would not be heavy. It is somewhat remarkable that sawdust has not been put to some general use. Some attempts have been made, but one by one the experiments have dropped out of sight. A year and a half ago, or thereabouts, a gentleman began the construction of a machine in this city for the compression of sawdust into fuel, railway ties, &c. The machine worked satisfactorily, but all at once nothing was heard of the invention or the inventor. Whither they have flown is unknown. Other attempts to make sawdust into fuel have been made, but after a flourish of patent rights on the processes, and a good deal of loud talking the schemes have amounted to nothing, so far as supplying fuel is concerned. It is a pity that so much of the timber that the millions of saws chew up should lie and rot. The mill men are crying that it be removed from their sight. It is generally the biggest white elephant they have on their hands. Senator Ingalls, who professes to believe that there is not enough timber in the country to furnish fuel for its inhabitants to exceed fifteen years, ought to go right to work and invent a way to burn sawdust. If he is particularly interested in the protection of our forests such an achievement would amount to a great deal more than swashy talk. If he would do this he would at least get a reputation of being practical, something that his talk about the exhaustion of our forests would never lead one to suspect. The timber yearly converted into sawdust in the United States would make not less than 2,000,000,000 feet of lumber. To make this amount of lumber would require 15,384,615 logs six feet long and 16 inches in diameter. If these logs were placed end to end, they would reach from Boston to San Francisco 13½ times. In other words, the sawdust made in the United States every year, if in logs, would build a solid log fence across America from east to west 18 feet high. That certainly would be a good deal of a wood pile. Now let the men who are feverish because in a few years they expect we will have no timber from which to cut lumber, to say nothing about fuel, in 10 or 15 years, go to work and utilize this sawdust, if they want their names handed down to future generations as public benefactors.—*Northwestern Lumberman.*

THE AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett, & Co.'s report, dated Melbourne, April 11th, says :—Since last issue the Easter holidays have intervened, causing a check to business, but notwithstanding this deliveries from the storeyards continue unabated for actual consumption. Dealers report an excelleut demand for all descriptions of building materials, and certainly the result of late harvest and splendid prospects of the pastoral and other staple interests of the colony fully warrant the belief that the demand will continue during the balance of the current year at least.

American lumber : At the sales ex Grandee, S. F. Hersey, &c., prices realized are in advance of late rates. Stocks held by the trade are light, and we look for an advance at future sales. We quote for Michigan clear pine, £20 15s. to £16 2s. 6d. ; Canada do., 1¼ to 4 inch, £12 7s. 6d. to £17 10s. ; w. p. shelving, £9 to £11 15s. ; w. p. ceiling £7 5s. to £9 12s. 6d. ;

per m. feet super according to quality. Norwegian and Scotch flooring: At the sales of cargoes ex Zenobia, Marco Polo, &c., rates realized are somewhat in advance of those obtained last month, and we look for further improvement shortly. We quote for 6x1$\frac{1}{3}$ red t. and g., 10s. 9d. to 11s.; 6x1$\frac{1}{3}$ white, 10s. 6d. to 10s. 9d.; 6x$\frac{7}{8}$ red, 9s.; 6x$\frac{7}{8}$ white, 8s. 9d. to 9s.; 6x$\frac{3}{4}$ red, 7s. 6d.; 6x$\frac{3}{4}$ white, 7s. 6d.; 6x$\frac{5}{8}$ red beaded, 7s. 6d. to 7s. 3d.; 6x$\frac{5}{8}$ white do., 6s. 9d. to 6s. 6d.; 6x$\frac{1}{2}$ red do., 5s. 9d.; 6x$\frac{1}{2}$ white do., 5s. 9d.; 4-out red and white weather boards, 5s. 9d. to 6s. per 100 feet lineal.

Messrs C. S. Ross & Co. say:—A fair amount of business has been done since last report in nearly every line of building materials, and prices generally have slightly advanced. The deliveries from the yards for consumption have fallen off, and the trade report a smaller business than that done for the previous twelve months. Money for building operarions can be obtained at reasonable rates, but the demand for tenements is not so active, and speculative building has declined. The store in store yards is very heavy, and a large portion will be in hand to meet the shipments from the Baltic of the coming season. The recent arrivals have been the Andora, Brenhilda, Loch Ness, Eivion, Essex, Sikh, Marsala, Siren, and Hornby Castle, from the United Kingdom, with flooring laths, &c., Vanadis, from Frederickstadt, and Callao, from Soderhamn, with red deals, flooring, doors, laths, &c., and others.

OTTAWA VALLEY NOTES.

Mr. Thomas Mackie's square timber made on the South River and Sturgeon last winter, was safely towed over Lake Nipissing to the C. P. R. siding for loading. In all there will be about 5,000 pieces, nearly two thousand of which is board timber. It was expected that the first train load of this timber would leave the siding on Wednesday last for Papineville where it will be unloaded and rafted up, Mr. Mackie having now a gang of men at that point. It is expected that should cars be supplied, two hundred pieces could be loaded per day. The general average of the whole cut will be about sixty feet.

It is said that the Scotch Syndicate intend driving the timber loose to the Des Jacobims, where it will be rafted up. Messrs. W. R. Thistle and O. Sills have a large number of logs on Centre and Carty Creek, Pettewawa, which cannot be got out this season owing to low water.

The saw logs are beginning to come down at a more lively rate.

Yesterday the steamer C. O. Kelly passed down with a large tow.

So far this season no less than five men have been drowned in the Black river alone. Of these, one was in the employ of Messrs. Fraser & McCoshen, one in the employ of J. R. Booth, one in the employ of Mr. Murray, and one in the employ of Hamilton Bros.

Mr. James C. Armstrong, manager for Barnet & Mackay, has arrived at Eganville. He reports that Messrs. Barnet & Mackay's drive will be there in about ten days if the weather is favorable.

Captain Young's drive commenced running out into the Ottawa at the mouth of the Pettewawa several days ago.

Perley & Pattee's drive on Chalk river has arrrived at Burned Bridge.

Mr. John Rowan is getting out all his drive. He had over 20,000 turned into the main Schyan last week.—*Pembroke Observer, June 8th.*

MONTREAL NOTES.

The *Gazette* of June 15th, says:—The local demand has been fair although not equal to that of a year ago, when it was exceptionally brisk. There is not much lumber arriving, which is rather a favorable feature than otherwise, as stocks in the city are already large. The only American inquiry reported is for ash. Laths are steady at last week's rates, and it is thought they have reached bottom, although they are still 10 to 12c. per M. above prices ruling a year ago. There has been an advance in the price of pine lath in Boston, where they have sold up to $2.50@2.75 per M. The export trade is commencing to show more activity, and we hear of charters being made to load lumber for the River Platte, of the barque Wolfe, 940 tons, at $14.50, and the Peter Crerar, 628 tons, at $15.50. There is a brisk export movement in deals. Two ships have just been chartered for London at 67s. 6d. The Deodarus is loaded with deals for Swansea and the Polstjernan with deals for Hull. The vessels Wimmera, Cupid, August, Leffler, Latona, Carla and Lorna Doone are now loading. The following vessels have been chartered to load at Montreal: Soy, Guelph, Murlet, Tiviot and the Bolivia to load at Three Rivers. Contracts have been given out for the construction of the new basins to be built above the present one, for the accommodation of the lumber, cordwood and coal interests. The work will be pushed forward with despatch, as improved facilities for meeting the increasing business of the port in the lines referred to are greatly needed.

STANDING PINE.

When the amount of standing white pine timber in the country is considered in connection with the annual production of lumber, it becomes apparent that without an unforseen, unexpected and disastrous business panic amounting to a veritble cyclone in its baneful influence, unsettling all values, there can be but very little prospect of any further decline in the price of white pine lumber, either in the near future or thereafter. The supply of standing timber is gradually and swiftly being reduced, and the demand is rapidly and constantly on the increase, while the capacity and number of mills keeps full pace with the demand. The effect of this increased demand and constantly decreasing supply is perceptible in the enhanced value of pine stumpage within the past few years. Standing timber which could have been purchased in Michigan less than a decade ago for $2 per thousand would to-day command from $5 to $7; and when we consider that a very material portion of it has changed hands at the latter price, within the time specified, it becomes apparent that any material reduction in the price of lumber must involve serious loss to the holders thereof, to which they would not be very liable to submit, as withholding the same from the market for a time, involves no expense further than the taxes on the lands, and such action must inevitably, by the action of the inexorable law of supply and demand, re-establish prices. Only one conclusion can therefore be arrived at in a consideration of this question, and that is, that the price of white pine lumber must be maintained. —*Lumberman's Gazette.*

NORTHWEST TIMBER LANDS.

Information is to hand going to show that the Canadian Northwest is going to experience a boom soon in the sale of timber land. A large number of American buyers have recently invaded that section with capital, and are making selections of the best tracts that are more easy of access.

The timber of that country, or at least the portion of it fit for lumber manufacture, has as yet been very little drawn upon. Hitherto lumbering has been little more than a system of culling from the best districts within easy reach of Winnipeg. The lower portions of Lake Winnipeg were, until very lately, the only locality where operations were carried on to any extent, and these have only recently been supplemented by cutting in the Lake of Woods country. As yet the vast timber fields on the upper Lake Winnipeg, where the finest spruce limits in the Northwest are known to exist, are almost untouched, although the establishing of a more extensive system of navigation on that lake is all that is necessary to bring these timber lands within easy reach of the Manitoba lumber market. It can scarcely be expected, with the present system of rapid development and ever-increasing demand for lumber which is now going on in the Northwest, these timber resources will long remain untouched, and it is just possible that American capital and American enterprise will soon assist much in their development. A number of lumbermen from this side of the line have been visiting the section around Lake Winnipeg, and it is expected that regularly organized parties will soon explore the country in that neighborhood and report on the prospects.—*N. Y. Lumber Trade Review.*

Chips.

NINETY-THREE thousand acres of land were planted with timber in Kansas last year.

THE low water this season in the streams around Rainy Lake and the Lake of the woods in the Debateable Territory, has very materially interfered with lumbering operations, and it is said will diminish this year's cut 30,000,000 feet.

THE Kingston *Whig* of June 11th, says:—Yesterday the biggest cut of timber for the season was accomplished at Gilmour's mill, Trenton. In ten hours 347,000 feet of lumber were cut. This is at the rate of 35,000 per hour.

AN Ottawa despatch says that a considerable quantity of square timber is passing through the Chats and Chaudiere slides. It is somewhat above the average, and timber-men are under the impression that prices will be good this season.

A HANDSOME maple planted by the Prince of Wales in 1860, a Canadian oak planted by Prince Arthur in 1869, and a Scotch fir planted by Princess Louise in 1882, are among the attractions of the Horticultural Gardens at Toronto.

FEW people are aware, or even stop to think, how much lumber is consumed in car-building. It is estimated that there are 400,000 cars in the United States, and, as three thousand feet in round numbers are used in the construction of a car, it follows that the cars that are rolling around the country represent 1,200,000,000 feet of lumber.

CULTIVATION should at all times be given to young trees to keep them in healthy growth and free from weeds. Where they have been set in rows it is a good plan to plow a light furrow towards them at the end of the season, this is called laying them by, or putting them to bed; it protects them from heaving and provides for the outflow of surface water.

THE *Monetary Times* says that a company of Montreal gentlemen consisting of Messrs. R. Hersey, M. Babcock, J. E. Rasin, W. F. Hutchins, E. R. Whitney and G. F. Cleavland, is being organized to engage in the manufacture of barrels, kegs, &c., under the corporate name of the Tomlinson Patent Barrel Company. The capital is to be $100,000 in shares of $100 each.

THE Glasgow correspondent of the *Timber Trades Journal* of June 2nd, says that in the list of arrivals here for the week will be noted the first of this season's imports of Canadian deals, several shipments having arrived per steamers—altogether 45,250 pieces. There has been no auction sale yet of any of these fresh arrivals. The yarding of them is going on busily meantime. The arrivals of spruce deals during May have been very heavy, amounting to 118,039 pieces, and the total since the beginning of the year is 192,555 pieces. Last year, at corresponding date, the total was 140,000 pieces.

SPEAKING of pitch pine, a correspondent of the *Timber Trades Journal* says:—"All along the west coast of France this class of wood goods is coming more and more into use. Not only for parqueting, but even for joinery and carpentry, it is rapidly finding favor. The pitch pine flooring has one great advantage over that from the north of Europe, viz., greater durability, and being free from knots, it has a finer aspect. The price is about the same as that from the northern countries, and an improved consumption of this wood may be auticipated. In Spain there is also a fair consumption of this class of wood goods."

THE Bristol correspondent of the *Timber Trades Journal* says that an auction sale of spruce deals (comprising about three cargoes) was held at Bristol on Wednesday, May 30th, by Messrs. Booth & Co., of Gloucester, Mr. Abraham Booth acting as auctioneer. The sale took place in the saleroom of Messrs, King Bros., at Canon's Marsh. There was a large attendance of buyers, and every lot was sold. The competition was fairly spirited, and the prices realized ranged from £6 17s. 6d. to £7 15s per standard, averaging all around a trifle over £7 2s. 6d. For lower port deals these prices must be considered satisfactory.

THE Selkirk *Herald* says:—Mr. G. H. Bradbury, general manager of the Northwestern Lumber Company, returned from Bull Head Bay, Lake Winnipeg, on Wednesday last. While in Selkirk he called at the *Herald* office, and in reply to enquiries stated that a raft of logs, containing about 400,000 feet of lumber, was ready for towing across the lake, and that he expected the Colville would start out for that purpose in a day or two. Mr. Bradbury had a very rough experience on his way in. He came in a canoe, and had to lay up the day after starting on account of the ice. When the lake was clear he resumed his journey and crossed the water in the storm of Tuesday, having a very exciting and dangerous voyage. Mr. Bradbury is looking well, and camp life apparently agrees with him.

THE Keewatin correspondent of the Winnipeg *Commercial* says:—The water is very low in the lakes, and all mill owners complain of the scarcity of power. Mr. Hall, of the Northwestern Telegraph Company, has been in town for the past week, looking for cedar telegraph poles. The steamer N. Mosher, Captain McMurdie has brought in three tows of logs and one tow of telegraph poles during the past week for the Keewatin Lumber Company, Messrs. Dick & Banning's drives, on Grassey and Pine rivers are lying up for the want of water, and will not come out this season, unless heavy rains come on during the summer. The steamer Lillie Macaulay, with a tow from Hungry Hall for Dick & Banning, was caught in a storm in the Grand Traverse and had to abandon the raft. The logs were all swept into Buffalo Bay, and are a dead loss, as it would cost more than they are worth to collect them again.

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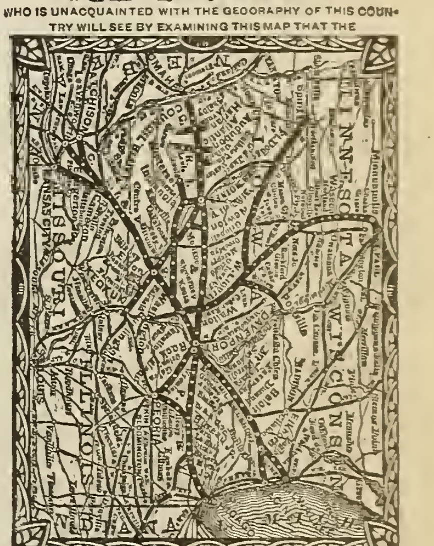
A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



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CHICAGO.

Market Reports.

MONTREAL.

From Our Own Correspondent

JUNE 25.—There is a good demand for laths which are scarce both in Ottawa and in this market, and the price has advanced about 50 cents per M, the quotation now being $1.75@ $2.00 with every probability of another rise shortly. Ash is in good demand, and very scarce; desirable quality cannot be had under our outside quotation. There is not much dry wood in the maket just now, and there is not any demand for green. The general demand has not been good, and our quotations, though unchanged, are weak. Export trade is beginning to show rather more life. Two vessels are at present loading for the River Plate and a third is in port and will begin to load for that destination as soon as her cargo is discharged. We quote prices ex yard as follows :—

Pine, 1st quality, ₩ M	$35 00@40 00
Pine, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@00 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	1 75@ 2 00
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

FREIGHTS AND SHIPMENTS.

Shipping for South America has begun, although there have been no clearances as yet. The last vessel taken up for the River Plate was at $15.50. The rate to the United Kingdom is steady at 67s. 6d. The shipments from this port since last report up to date have been as under: To Liverpool, SS Quebec, 7,838 pcs deals; SS Sarnia, 12,694 pcs deals; SS Parisian 12,225 pcs deals; Bk. Bolivia, 49,500 ft deals; Bk. Cupid 553,417 ft deals. To London, per SS York City, 11,057 pcs deals; Bk. Wimmina, 36,609 boards, 13,165 deals and 2,036 pcs deal ends. To Plymouth, Bk. Echo, 3,736 pine deals and 112 ends. To Swansea, Bk. Deodarus, 5,989 pcs deals. To Bristol, SS Somerset, 9,156 pcs deals. To Cardiff, Bk. Casta, 10,818 pcs white and red pine, 680 pcs white deals. To Hull, Bk. Latona, 12,213 pcs white deals and 739 pcs deal ends.

LIVERPOOL MARKET.

Advices by last mail state that the market is sadly wanting in animation and for some articles prices are easier. Spruce deals have been sold at £7 2s. 6d. per std. ex quay, both by private bargain and by auction. American walnut was placed at 4s, 6d. to 6s. 9d. ex quay. Quebec square white pine 1s. 7d. to 2s. 5d. per cub. ft. Quebec red pine 1s. 3d. to 1s. 8d. Quebec 1st quality pine deals £21 to £22 per standard.

CORDWOOD.

There has been no improvement in the domand, but as the imports are still very limited, they are sufficient in the present state of business to keep prices about steady. Notwithstanding the endeavor by the coal dealers to raise the price of that article it is still relatively cheaper than wood, which would require to fall considerably lower to induce people to purchase to any extent.

Long Maple	$ 7 00
Short "	6 50
Long Birch	6 00
Short "	5 50
Long Beech	6 00
Short "	5 00
Long Tamarack	5 25

TORONTO.

From Our Own Correspondent.

JUNE 23.—The lumber trade from the yards and over the docks is extremely quiet at present, consequently there is little worthy of record to give you. The docks are piled up full with lumber, and a considerable quantity remains on cars waiting for shipment. So that unless shipments are soon made a large portion of the R. R. Company's rolling stock will be tied up for want of sufficient room to pile it on the docks. The quantity of really good lumber coming forward is small compared with previous years, owing, doubtless, to two causes. First, the price offered by dealers on the other side for clear and picks will not induce holders of dry stocks to send forward; secondly, owing to the late starting of the mills this season none of the new cut is yet in a fit condition to ship. The quantity going forward to Manitoba is not as large as was anticipated previous to the opening of the navigable season. The reason for this is not hard to define. Manitoba has become largely self-supplying; therefore, any lumber now sent from here has to compete with that manufactured on the spot. Still, in spite of this home competition, with reasonable freights through from the Georgian Bay a considerable quantity of lumber will find its way from there to the Northwest Territories.

The Midland and Grand Trunk Railway Co.s have so arranged matters between themselves so as to admit the shunting of cars to Parkdale without charge, as formerly, which will prove beneficial to all concerned, and if the former company would go a trifle farther while they have their hand in and give dealers somewhat lower rates from Midland to this city, it would not come amiss. Eight and a-half cents per hundred weight for lumber for the distance travelled is considerably higher than it ought to be; 7½ cents would be ample rates and at the same time confer quite a boon on dealers and consumers alike.

Although trade from the retail yards is dull there does not seem any tendency to cut on figures hitherto demanded. Shingles and lath are quite firm at former quotations. Manufacturers hold out stiffly for 2.35 per M. for 16 in. shingles at the mill, so that it can easily be seen that $3.00 per M is not out of the way at all when delivered from the yards.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1¼-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	3 00
Sawn Lath	3 00

WINNIPEG.

From Our Own Correspondent.

JUNE 19.—Before quoting prices in the principal northwestern lumber market, a brief description of the building methods and the different kinds and grades of lumber would be in place.

The scantling frame is the usual style of construction for wooden buildings. This is set on a timber foundation, resting on oak posts sunk in the ground, stone being very costly. The sills of some houses are several thicknesses of plank laid flat on the prairio. The lower floor is always double dressed, sheeting is first laid upon its joists, on this is laid one thickness of tarred building paper which cuts of dampness and cold air currents from below. On this is laid the floor proper, usually of dressed pine ⅞ in. x 6 in. or 4 in. tongued and grooved. This would be considered thin in Ontario, but the wear on floors seems not quite so great here, the absence of grit in the soil no doubt accounting for it. Good average buildings have always a course of dressed sheeting on the outside of studs, then a course of plain building paper, then the siding 6 in. x ⅞ in. tongued and grooved similar to flooring except that the shoulder of the joint on tongued edge is entirely cut away in the form of a broad concave chamfer. This makes by far the best outside wall. It is solid, neat and tight, not penetrated by either rain or snow. The old fashioned thin siding and the perpendicular board and batten style are almost unknown here. There is a small quantity of re-sawed siding with thick and thin edge; its cheapness is its only recommendation. It is but little used. Roofs are of all varieties and styles. Tin is pretty freely used on flat and mansards. There is an American pressed iron slate or shingle which is used on the faces of mansard roofs, which appears to be neatly adapted to its purpose. A course of the usual tarred building paper is spread on the sheeting and upon it the shingles are generally laid.

In those mushroom towns that elevate their heads on the prairie in a season, if not in a night, there is a poor chance for the plasterer and painter. The inside walls, ceilings and partitions are of dressed lumber. The walls and ceilings are generally done with a kind called ship lap, about 6 in. x ⅞ in. Its name comes from the half lap joint with which it is made. The partitions are of narrow boards planed and beaded on each side with tongue and groove.

The lumber sawed here is of the exact size, that is, a 10 in. board is just 10 in. wide and barely 1 in. thick. With regularly manufactured lumber in Ontario it would be 11¼ in. wide and 1⅛ thick. That is what we sell to the Americans. When we buy from them in the Min neapolis or St. Paul market the bare size is all we look for and we do well to get it.

The extra dimensions of Ontario siding and the odd foot of 13 feet lumber is about as good as wasted in this market.

The prices to builders here are as follow:

Common boards	$28 00@00 00
Sheeting	25 00@00 00
Culls	23 00@00 00
Dimension stuff, under 18 ft	27 00@00 00
Spruce Dimension	25 00@00 00
Fencing 6 in. x 1 in	27 00@00 00
Stock boards	30 00, 35 00@40 00
DRESSED LUMBER.	
Siding	30 00, 35 00@40 00
Flooring	30 00, 35 00@40 00
Ship lap for ceiling	35 00@00 00
Common ship lap	30 00@00 00
Clear lumber	45 00, 50 00@60 00
Shingles	4 00@ 5 00
Lath, per M	4 50@ 0 00
Rough pickets	30 00@00 00
Dressed "	35 00@00 00

BOSTON.

Cotton, Wool and Iron of June 23, says:—Trade is of fair proportions and the range of genoral values keeps along pretty steadily. Eastern lumber is held at about previous prices, with a moderato enquiry. Western pine seems to hold it own. Southern pine shows rather a firmer undertone at the low prices ruling of late. Hardwoods are in fair demand for desirable selections, with no particular change in values.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

The *Northwestern Lumberman* of June 23rd, says:—The arrivals of cargoes at this port for the week ending on Wodnesday were a little in excess of thoso of the week previous, numbering up to 252. A large proportion have also stopped at the sale docks. On Monday, always a great market day, when the wind has been favorable, there was a numerous fleet on the market, the cargoes going off rather slowly, but steadily. Big fleets followed on Tuesday and Wednesday, so that the market hardly had time to recover its wind, as it were, after its effort to unload tho heavy offerings on Monday. The week thus far has been one of plethora, while buyers have been apathetic about taking hold. On Wednesday particularly, the market was very quiet, a limited number of buyers being in attendance, and the few present having a poor appetite for lumber. There were largo offerings of shingles, which were neglected and weak. The tone of the market generally was characterized as "soft" by both buyers and sellers, and inclined to sag fully 25 cents below last weeks figures, short piece stuff selling often at $9.75 that last week brought $10, desirable stock running 20 per cent. to 18 feet and upward, generally selling for $10, with an occasional cargo containing 50 per cent. long stuff brought $10.50. Long timbers continue to be a drug, and sell for $11.50. Some cargoes of piece stuff, having an objectionable percentage of "spindling" lengths, have sold for $9.50. The expression of the commission men and buyers being unanimous that the market was soft and sluggish, leads to the inference that the figures quoted are the top notch, and that some transactions may have taken place on private terms at lower figures. The tendency since Monday has been to give a slight advantage to the buyer.

Quotation are as follows:

Short dimension, green	$ 9 75@10 25
Long dimension, green	10 50@11 50
Boards and strips—No. 2	11 00@13 00
Boards and strips—Medium	13 50@16 50
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 40@ 2 50
Extra A	2 55@ 2 85
Lath	2 10@ 2 25

Receipts of lumber, shingles, etc., for the week ending June 21, as reported by the Lumberman's Exchange:—

	RECEIPTS.	
	Lumber.	*Shingles.*
1883	64,714,000	36,703,000
1882	65,778,000	38,327,000

FROM JANUARY 1, 1883, TO JUNE 21, 1883, INCLUSIVE.

	RECEIPTS.	
	Lumber.	*Shingles.*
1883	460,892,000	342,668,000
1882	679,799,000	332,354,000
Increase		10,314,000
Decrease	218,907,000	

STOCK ON HAND JUNE 1.

	1883.	1882.	1881.
Lumber	327,939,628	372,711,591	270,317,046
Shingles	152,787,642	167,508,300	91,607,700
Lath	40,435,868	21,909,726	20,658,679
Pickets	1,454,390	1,093,323	2,193,415
Cedar posts	311,853	238,823	77,042

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₩ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ₩ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	35 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

OSWEGO, N. Y.

Three uppers	$46 00@48 00
Pickings	36 00@38 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	12 00@15 00
Mill run lots	19 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	35 00@40 00
Mill run, 1x10, 12 inch	19 00@22 00
selected	22 00@26 00
Shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	35 00@40 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 50@ 3 70
Lath	2 00@ 2 50

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

NEW YORK.

The *New York Lumber Trade Review* says:—We would be most happy to report a favorable change in the condition of the general market had we the facts to back such a statement, but in the absence, we are obliged to chronicle the same position of affairs that we have reviewed for some weeks past. The demand for the season is exceedingly slow and uncertain. An occasional bill will make its appearance on the market, but when it does a brisk competition is encouraged and the result is it goes low. The tone of the market continues easy, in the absence of the

usual summer trade. Prices are favorable to buyers, but this fact does not serve to stimulate interest, as purchases are only made in accordance with actual wants, and this line of policy laid down will not seemingly be overstepped.

Spruce has been received in more liberal quantities, and with some little anxiety to work off the increased stock, consignees have been obliged to modify slightly their previous prices. Sales of ordinary random cargoes have been made at $13, but at the close this quotation was considered rather low, as the market having been cleared, the inside price named for anything afloat to arrive was $13.50, while up to $15.50 was asked for strictly desirable lots.

BORDEAUX.

The *Timber Trades Journal* says:—Some of your readers may be interested in knowing the present state of this market, but though I cannot write much of an encouraging nature, there is a better prospect from the fact of the splendid weather we are enjoying, which imparts new hopes for the near future, and promises a good harvest, which is much needed. The last few months have really been a period of entire stagnation, though the season did not open so very badly. Fair prices were paid by the leading firms, but, instead of being contented with the results thus obtained, the sellers continued to press their stocks, thus giving the smaller houses opportunity to buy at even cheaper prices, and causing the larger ones to lose confidence.

What has surprised the timber trade here has been the firmness on the part of the spruce shippers, or rather their unwillingness to accept the prices offered by the importers; but the former have gradually given way, and now offer to close business at something like 7s. less than their opening quotations, but which sum the buyers here are not even prepared to pay.

CARDIFF.

The *Timber Trades Journal* of June 9 says: The timber market here remains far from satisfactory. As far as we can learn, very little has been done with the Baltic during the past week. One lot of from 400 to 500 standards of deals has changed hands, but the exact price, although not yet disclosed, is not believed to point to any improvement. Steamer charterers are holding out strongly at 33s. 6d. from the lower Baltic ports. From Quebec there is almost nothing being done. In the pitwood market overstocking seems to be still the order of the day. French and Scotch fir are selling freely at 17s. 6d. to 18s., which means a severe loss to the importers, when we say that prices at Bordeaux are maintained at about 14s., free on board.

LONDON.

We take the following from Messrs. Churchill and Sim's London circular of June 10th:—The stock of wood in the docks on the 31st May was—foreign deals and battens, 3,545,000 pieces, against 4,150,000 in 1882 and 3,767,000 in 1881; pine and spruce battens, 935,000 pieces, against 1,309,000 in 1882 and 1,681,000 in 1881; on the quays, 267,000 pieces, against 368,000 in 1882 and 259,000 in 1881; boards, 5,565,000 pieces, against 7,328,000 in 1882 and 4,483,000 in 1881; total, 10,312,000 pieces, against 13,155,000 pieces in 1882 and 10,190,000 pieces in 1881. The delivery from the docks from the 1st of January has been to June 2, 1883—foreign deals and battens, 4,573,000 pieces; pine and spruce battens, 1,158,000 pieces; boards, 4,571,000 pieces; to June 3, 1882—foreign deals and battens, 4,594,000 pieces; pine and spruce battens, 1,401,000 pieces; boards 4,790.000 pieces; to June 4, 1881—foreign deals and battens, 4,852,000 pieces; pine and spruce battens, 1,563,000 pieces; boards, 4,435,000 pieces. Or in cubical contents to June 2, 1883—sawn wood, 84,896 P. S. H.; prepared boards, 15,265 P. S. H.; timber, 44,467 loads to June 3, 1882—sawn wood, 88,773 P. S. H.; prepared board, 16,876 P. S. H.; timber, 40,211 loads; to June 4, 1881—sawn wood, 97,355 P. S. H.; prepared boards, 15,010 P. S. H. timber, 41,356 loads. The market in the past month has been lifeless, there having been but little demand either for the landed stock or for cargoes to arrive.

The *Timber Trades Journal* of June 9, says: Messrs. Churchill & Sim's forthcoming sale will be interesting from the fact of the catalogue including several parcels of Gefle deals of this season's shipment from one of the leading mills over there, some of which are for absolute disposal, besides other clearing lots from this port of favorite brands. There are also several lots of deals, &c., from Dickson's ports for those who hold to the reputation this shipment has so long enjoyed. In respect to other descriptions, the Quebec pine, ex Red Jacket, without reserve, is likely to prove attractive, and in anticipation of the forthcoming shipments, which cannot be here for several weeks yet, ought to meet with plenty of bidding. The recent heavy sales of Fredrikstadt flooring have apparently not diminished the confidence of sellers in the ability of the market to go on consuming, and several such cargoes are distributed over the pages of the catalogue in the usual marketable sizes. Oak wainscot and sawn white oak planks as well figure amongst the unreserved lots, and a good assortment of pitch pine timber makes the sale altogether a specially attractive one, presenting an opportunity to the trade to suit themselves with almost every description they require.

LIVERPOOL.

The *Timber Trades Journal* of June 9th says:—Trade remains in a quiet condition all round, and the quays and wharves wear an aspect the reverse of animated. This, however, is not unusual at this time of year, seeing that the import season will soon be upon us, and many buyers refrain from putting their orders in the market until it has fairly commenced, and others are deterred from operating so late in the half-year.

The import for the past month, as we have reported from week to week, has been light. In pitch pine, both hewn and sawn, it is less than half the quantity imported in the corresponding month of last year, and the supplies of spruce also show a large decrease when compared with the same period. The demand for these articles, however, appears to have diminished in like proportion, leaving the stocks of timber but little below those of last year, whilst the stocks of deals of all kinds, flooring, &c., are in excess.

Prices continue low, and so long as the present condition of trade continues they are likely to do so. On all sides we hear complaints of the unsatisfactory state of the building trade, and until it assumes a more healthy tone it is useless to look for any marked improvement.

GLASGOW.

The *Timber Trades Journal* of June 9, says: The wood market here does not give the indications of briskness that might be expected, looking at the activity that prevails in the shipbuilding trade and the improved condition of housebuilding shown by the advance of a half-penny per hour given last month to the house joiners. On the contrary, it is rather dull for most descriptions of goods. There is an opening for birch and walnut logs, of which the market is comparatively bare. The large cargo of lower port birch that was recently brought to auction, as noted in the *Journal* of the 26th ult., is now all cleared out of first hands.

The public sale held at Greenock on the 31st was well attended. Of the goods offered, a large portion belong to a wrecked cargo (sold without reserve), and some portions were more or less damaged or chafed, so that the prices realized must not be taken for the market rate.

WASTE IN SAW DUST.

The Winnipeg *Commercial* says:—In the vast country extending from Lake Superior to the Rocky Mountains, in parts of which timber is plentiful, and in other sections of which fuel is scarce, the question of utilizing the enormous quantities of sawdust produced in the lumber districts as a source of fuel supply is one deserving of attention. The immense lumber cut of our mills every season will produce a quantity of sawdust, which if it could be made subservient as fuel would go a considerable way towards solving the problem of how our western country is to be supplied. Upon this subject the *Lumberman's Gazette* of Bay City, Mich., says:—"The timber converted into sawdust by the circulars on the Saginaw river is a very important consideration, and amounts annually to millions of feet, and any invention which would be successful in saving any considerable portion of it and still compete in the amount of lumber produced would be a rich bonanza to the inventor, equal to an interest in the best flowing oil well or the richest silver mine in the country. Necessity is said to be the mother of invention, and as the forests disappear and timber becomes scarce, the necessity for economy becomes more and more apparent, and it is not beyond the range of possibility that great accomplishments in this direction are in store for the future."

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

SPEARING FOR TIMBER.

A new industry has recently been developed in Ireland—a sort of timber prospecting never dreamed of by our American pine hunters. It is a well known geological fact, says the *Northwestern Lumberman*, that immense tracts what are now bog lands in Ireland were once covered with forests of oak and pine, and that in cutting peat, immense trees of these varieties are found embedded in the earth at depths of ten, twenty and thirty feet, in many cases whole groves being found standing just as they grew. To find out the location of these miniature subterranean forests is now the speculative work in which some industrious Irishmen are engaged. The timber, when brought to the surface, is found to be perfectly sound, and the oak, which is as black as ebony, is used extensively for ornaments of jewellery and fancy cabinet work, and sells at a high price. A recent visitor to the wild moor and mountain region of Donegal thus describes the way in which the seekers after burried forests operate. Two men, armed with steel rods about thirty feet long, traverse the bog, and by running their rods into the ground are able to ascertain where the trees are to be found. They work by what may be termed natural mathematics, and quickly determine the length of their prize, its approximate diameter, whether it is pine or oak, and is or is not a clumper—one of a company or clump. They fix on twenty or thirty feet square, and cross it with their searchers, say north and south, and then east and west, search it across each way, a stab to each foot or so, and in the course of a few minutes they know whether that area contains what they are looking for. The square lying next and next, and all near each other, are so searched, and the discoveries, if any, marked for future action. The unprodnctive are also marked, to avoid future loss of labor.—*Scientific American.*

WOOD WORKING MACHINERY.

The question is often asked, will the machinery, especially wood-working machinery, of one hundred years hence embody any special advantages not possessed by the most improved tools of to-day? In some particular tools there is undoubtly room for improvment, while in others perfection seems to have been attained. Many so called improvements are only such in name, and there are those who claim that the planing machine for instance, is no better to-day than ten years ago, and hence is not liable to be improved upon to any great extent. In saw mill machinery there is room for improvement, noticeably in the direction of closer economy in the production of lumber. As our timber becomes scarcer these improvements will gradually assume shape.—*Wood Worker.*

Convincing Proof.

Having suffered from rheumatism for a long time I was indnced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Drug gists.

A VOICE FROM THE UNITED STATES.—I have suffered for the last twenty years with Dyspepsia and Ceneral Debility, and tried many remedies, bnt with little success till I used Burdock Blood Bitters when relief was qnick ahd permanent. A. LOUGH, Alpena, Michigan, U.S.

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto

BAXTER'S MANDRAKE BITTERS

THE ONLY VEGETABLE CURE FOR

DYSPEPSIA,

Loss of Appetite,
Indigestion, Sour Stomach,
Habitual Costiveness,
Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

MINNESOTA LUMBERING.

Respecting the drives in Minnesota, the *Mississippi Valley Lumberman* gives the following information :

"The Prairie River logs have been abandoned probably for the year. There have been no logs got out of the Big Swan River drive so far, and the water is low and falling. Unless heavy rains occur in a very few days it will also be deserted. The main upper Mississippi drive has commenced to run at Aitken ; the jam at Pokegama Falls having been broken, this drive will come in O. K. The lower Willow, including Quadno and Moose, are running into the Mississippi, and no fears are entertained but they will come. The upper Willow is coming hard and in sad need of rain to make the work easy. No logs out of Split Hand, but the boys are working like beavers to bring them. One drive on Sandy Lake can be had if it seems to be needed, but lower Prairie, Tamarac and Sandy rivers are all very low, many logs will be hung up. It is reported that some 18,000,000 or 20,000,000 feet of logs off the waters of Platte River are in Rice Lake, but upper Platte and Hillman drives are stuck. The main East branch of Rum River is safe on present water. The rear of main East branch drive is below Princeton and most of the logs are in Anoka boom. There is no news from the West branch drive, beyond the fact that a half crew are on the river working, but cannot get out unless there is heavy rains. The probabilities are that this drive will be hung up."

QUEBEC.

A correspondent on June 14, says :—This season of navigation has brought a considerable increase both in numbers and tonnage of shipping to our port as compared with last year, and business generally is good. One great drawback is the scarcity of skilled men to load the vessels, many of them having left the city. This large fleet is fast using up the stocks of square timbor which our merchants wintered over at the several coves, and the new timber now on its way to this market will no doubt meet with ready sale at remunerative prices. Deals have been slow of sale so far this season, although within the last few days two mill cuts of spruce have been disposed of. Joly's, of Lotbiniere, sold at $41.75, $26.75, $24.75 and $19.75, for firsts, seconds, thirds and fourths, respectively, f. o. b.

The *Chronicle* of June 15th, says :—Notwithstanding that we have a large number of ships loading, our merchants are, generally speaking, well supplied, and do not show any inclination to purchase. One new Ottawa raft, belonging to Messrs. A. & P. White, has arrived, and two or three others are reported to be near at hand. We understand there has been more enquiry for deals, owing to the large shipments which are being made, and the general opinion seems to be, that prices will be well maintained for the present.

HALIBURTON, ONT.

From Our Own Correspondent.

Shingle and Lumber Mills.—The new shingle mill of A. Sperry, of Peterborough, is now ready to run, and he has a lot of logs to start with. They were brought up the stream as there is no current. They are very fine logs for shingles. The mill is fitted up in first class style ; the mill proper is 30x60 feet, two and a half storeys, an engine room 20x30 of one storey. A lean to to the main building about 12x30 for the drag saw, which is on the ground floor, where the logs are cut in blocks and split and taken up stairs by an endless chain. The lower floor of the mill consists of sawdust carriers, and all the shatting except one line of shaft is over head on the lean to that drives the two Perkin's patent shingle machines and the Covel saw sharpener, made by Wm. Hamilton, of Peterborough, which are on the second floor, also a circular saw for ties and lumber, a saw to trim the shingle block and four saws for jointing shingles. The two shingle machines are of first class make, and are under the management of John Belleghem, of Peterborough, who has been with Mr. Sperry for a number of years. The jointing and packing machines are under the control of Messrs. H. and A. Dunn, of Peterborough. The circular saw has not started to run as yet, as men of the right stamp are rather scarce, in fact what men are at work in the mill come from Peterborough. Haliburton may be proud of having such a mill in the village, as it has increased the population by about forty people, young and old, and there must be still more, as it will take about 25 or 30 hands to run all the machinery in the mill. Haliburton is located on a very pretty lake called Head Lake on the north branch of the Burnt River. At the north end of the village, Mr. Irwin has a water saw mill, one circular saw, double edger and trimmers, which turns out over 30 M of lumber per day ; and alongside we have a grist mill which does all the gristing for the surrounding country.

YOUNG'S POINT, ONT.

From Our Own Correspondent.

The Drives.—Mr. Geo. Chalmer's drive arrived here on Thursday last, consisting of 36,000 peices. After sorting out here, the pine logs are to be driven down to Hilliard's mill to be cut into market lumber. The cedar logs and ties will be cut at the saw mill here. Mr. P. Cassidy is foreman, and he has a good gang of men. The cook and cookery are second to none on the river for clealiness and good food.

The Drives in Eels Creek.—The two remaining drives in Eels Creek are getting on splendidly. Messrs. Ullyott & Saddler havo a large number of saw logs and about 45 men. Mr. Barr foreman. Mr. Geo. Chalmers has a large quantity of saw logs and square timber ; he has 20 men, A. Wynn, foreman. They have done well and expect to be at the mouth of the Creek, in Stony Lake, if all goes well, in about two weeks' time, when the two firms will assort out their respective logs. From what I can learn these two drives have made tho best run that has been made on Eels Creek.

Large Saw Log Drives.—Messrs. Rathbun & Son have three large drives lying here ready to run. This firm has a great quantity of stuff to pass through here this summer. They employ a great many men. Mr. Erwin, of Nassau Mills, has a large drive of saw logs, 18,000, and, 4,000 peices of square timber, ready to run over the dam here. Mr. Douglass is forman.

The Water.—The water is very high for this season of tho year and is still rising.

The Sawlog Drives.—Messrs. Ullyot & Saddler's and Mr. Geo. Chalmers' respective drives of sawlogs and square timber arrived at the mouth of Eel's Creek, on Friday, June 15th. A. Wynn, foreman for Mr. Chalmers, has brought his sawlogs and square timber, a distance by water of 75 miles, and he has accomplished this inside of three weeks. Mr. Barr, foreman for Messrs. Ullyot & Saddler, is also to be congratulated for his success. No doubt his employers will say he is a good man for this work, as he has driven nearly tho samo distanco as Mr. Wynn. The two firms aro now busy assorting their respective logs at tho mouth of the creek in Stony Lake, where they will make a start for their saw-mills. Mr. Burke, foroman for Messrs. Ullyot & Saddler, is now ready to run over here with 30,000 fino sawlogs for the Harwood steam saw mills. He has been detained here for a few days with head winds and by Messrs. Rathbun's drivo which was ahead of him.

Square Timber.—Mr. Irwin, of tho Nassau Mills, is going to have all his square timber that has been cut back of Haliburton, brought down those waters and shipped at Lakofield. In previous years he had it shipped at Lindsay.

WASTE IN SAWDUST.

The Winnipeg *Commercial* says :—In the vast country extending from Lako Superior to the Rocky Mountains, in parts of which timber is plentiful, and in other sections of which fuel is scarce, the question of utilizing the enormous quantities of sawdust produced in the lumber districts as a source of fuel supply is one deserving of attention. The immense lumber cut of our mills every season will produce a quantity of sawdust, which if it could be made subservient as fuel would go a considerable way towards solving the problem of how our western country is to be supplied. Upon this subject the *Lumberman's Gazette* of Bay City, Mich., says : "The timber converted into sawdust by the circulars on the Saginaw river is a very important consideration, and amounts annually to millions of feet, and any invention which would be successful in saving any considerable portion of it and still compete in the amount of lumber produced would be a rich bonanza to the inventor, equal to an interest in the best flowing oil well or the richest silver mine in the country. Necessity is said to be the mother of invention, and as the forests disappear and timber becomes scarce, the necessity for economy becomes more and more apparent, and it is not beyond the range of possibility that great accomplishments in this direction are in store for the future.

LOST IN THE WOODS.

A very sad accident took place at St. Rose a few days ago. One Joseph Desjardins, a laborer of the place, left the village about a week ago for the woods, some five miles off, for the purpose of felling trees. He had been for some time absent, when the villagers, at the request of the family, instituted a search for him. After much trouble, the unfortunate man was found lying at the foot of a tree, with two large wounds on his head, and in an insensible condition. He seemed to be dead, but upon closer examination was found to have life in him. He was conveyed home with the greatest care, and is now in a very weak condition, and little hopes are entertained of completo recovery. When he regained consciousness, Desjardins told those around him that he had been felled to the ground by the falling of a tree upon him. On trying to reach home, he was exhausted by loss of blood and fell down at the foot of the tree were he was found. He remained there two days and two nights, exposed to a pouring rain during several hours, without food, and bleeding. He had heard tho villagers calling him on the first day of the search, but was too weak to answer, Desjardins, as has already been said, is very poor, and has a family of five children.

A YEAR WITHOUT A SUMMER.

During a cold spring like that which is just now drawing to an end, people generally console themselves with the reflection that the sun will eventually get the victory, and that summer will certainly come at last, though its coming may be delayed. Uncertain as the weather is, the general features of the seasons recur with a regularity which warrants the confidence thus reposed in the annual return of seed-time and harvest ; but there are instances on record in which even the seasons seem to have lost their characteristic features, as if the ordinary laws of meteorology had been temporarily suspended. A remarkable case of this kind, and one which the long continued cold weather of this spring makes particularly interesting just now, is that of the year 1816, which has been called "the year without a summer." A communication printed in the *Congregationalist* gives the following summary of the weather of this remarkable year :

January and Feburary were mild : March was cold ; April began warm, but ended in snow and ice. Ice formed an inch thick in May, and fields were planted over and over again till it was too late to replant. June was the coldest ever known in this latitude ; frost and ice were common. Almost every green thing was killed ; fruit nearly all destroyed. Snow fell to the depth of ten inches in Vermont, seven in Maine, three in the interior of New York, and also in Massachusetts. There was a few warm days. It was called a dry season. But little rain fell. The wind blew steadily from the north, cold and fierce. Mothers knit extra socks and mittens for their children in the spring, and woodpiles that usually disappeared during the warm spell in front of the houses were splendidly built up again. Planting and shivering were done together, and tho farmers who worked out their taxes on the country roads wore overcoats and mittens. In a town in Vermont a flock of sheep had been sent out as usual to their pasture. On the 17th of June a heavy snow fell in New England. The cold was intense.

A farmer who had a large field of corn in Tewskbury built fires round it at night to ward off the frost ; many an evening he and his neighbors took turns watching them. He was rewarded with tho only crop of corn in the neighborhood. Considerable damage was done in New Orleans in consequence of the rapid rise of the Mississippi River. Fears were entertained that the sun was cooling off, and throughout New England picnics were strictly prohibited.

July was accompanied with frost and ice. Indian corn was nearly all destroyed, some favourably situated fields escaped. August was more checrless, if possible, than the summer months which preceded it. Ice was formed half an inch in thickness. Indian corn was so frozen that the greater part was cut down and dried for fodder, Almost every green thing was destroyed in this country and in Europe. On the 30th snow fell at Barnet, forty miles from London. Very little corn ripened in New England and the Middle States. Farmers supplied themselves from corn produced in 1815 for seed in the spring of 1817. It sold at from $4 to $5 per bushel.

September furnished about two weeks of the pleasantest weather of the season, but in the latter part of the month ice formed an inch thick. October had more than its share of cold weather. November was cold . and snowy. December was comfortable, and the winter following was mild. Very little vegetation was matured in the Eastern and Middle States. The sun's rays seemed to be destitute of heat during the summer, and nature was clad in a sable hue, and men exhibited no little anxiety concerning the future of this life.

The average price of flour during the year in the New York market was $13 a barrel. The average price of wheat in England was 97 shillings per quarter. Bread riots occurred throughout Great Britain in 1817, in consequence of the high price of the staff of life.

Big Trees.

To give some idea of the magnitude to which some of the cypress trees attain, which are cut on the river above and brought to this market, I will state that two weeks since I surveyed a raft that came from Calhoun County (Louis Refoe), four logs of which were sawn from one tree and scaled as follows :

36 in. diameter,	16 feet long,				1,024
38 "	"	"	"	"	1,156
40 "	"	"	"	"	1,296
42 "	"	"	"	"	1,444

Making a grand total of 4,920 feet—Doyes Rule. The top log was perfectly sound, and all of the best quality of white cypress. There was not a knot visible on the surface of any of them. The lowland forests contiguous to the river and tributaries abound in similar monsters, and it only requires capital and enterprise to unlock these treasures of wealth.—*Apalachicola Tribune.*

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

DR. FOWLER'S
EXTRACT OF WILD
STRAWBERRY

Cures Cholera, Cholera Morbus, Dysentery, Cramps, Colic, Sea Sickness and Summer Complaint ; also Cholera Infantum, and all Complaints peculiar to children teething, and will be found equally beneficial for adults or children.

FOR SALE BY ALL DRUGGISTS.

T. MILBURN & CO.,
Proprietors, Toronto.

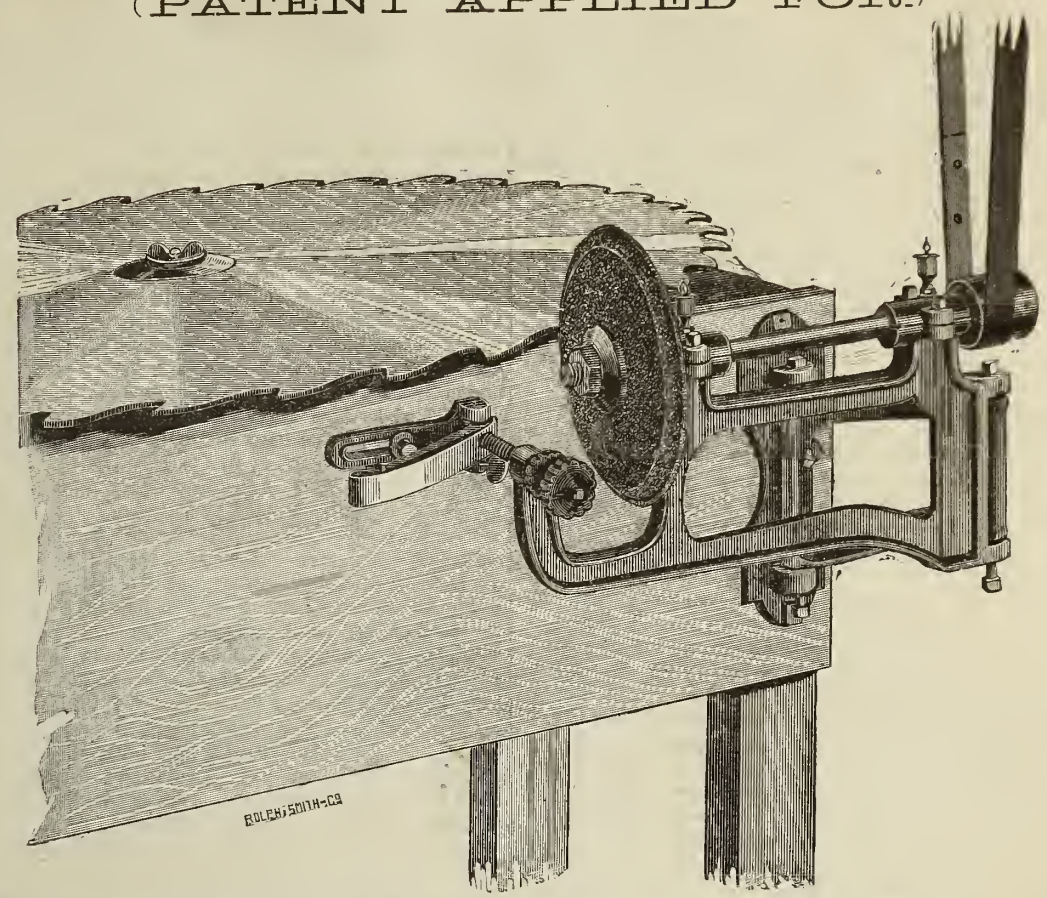
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

Complete!

POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!

JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞ Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

NEW YORK LUMBER FREIGHTS.

The Ottawa *Citizen* of June 20, says:—It will be remembered that the American captains struck this spring for $4 per thousand on lumber to New York and $3.75 to Albany, to which the mill men had to accede, but very reluctantly, being 50c. per thousand more than they had calculated on. In order to conciliate the feeling and work harmoniously, it was unanimously resolved at a meeting of the boatmen held in the company's offices, 23 South street, New York, on Saturday, the 7th instant, to establish the following rates:—

Ottawa to Burlington and Whitehall	$2 25
" Troy and Albany	3 50
" New York	3 75

Twenty-five cents extra on strips to Albany and New York. This is acceptable to the Ottawa mill men, and shows that the boatmen are desirous of doing what is right and do not wish to take advantage of their customers. The boatmen are thoroughly organized under a charter in New York State, and are styled the "Northern Boatmen's Transportation Company." The company comprises a carrying capacity of about five hundred (500) boats of about one hundred and fifty tons each. Their affairs are managed in New York by Mr. Geo. F. Hastings, 23 South street, their agent in this city being Messrs. D. Murphy & Co.

It is most satisfactory that an amicable arrangement is arrived at between boatmen and lumbermen, and the association will now have the hearty good will of American men generally.

HANDLING LUMBER.

Here is some good advice for saw mill men. It is furnished by a correspondent of the *Southern Lumberman*: When the lumber is taken from the saw by the off-bearer, never allow it to be thrown down, but lay it down carefully, and keep up this rule every time it is handled until placed in the car for shipment. When lumber is bulked down, always put each length down in separate piles, for instance, 10 feet lengths in one pile, 12 feet in another, and so on; this prevents splitting from exposure. When different lengths are piled together in a bulk as it comes from the mill, the result is that the ends of the longer boards crack, and thus the value of the lumber is reduced. Have your lumber properly trimmed before it leaves the mill, bad ends cut off square; rip out all hearts, even if by so doing you get a three-inch clear strip from each side. These strips are more valuable if clear and straight than the whole board with a bad heart in it, besides, you save the expense of handling so much surplus wood. Having your lumber properly trimmed and assorted as to lengths at the mills, keep it that way all the time while hauling, piling on sticks, hauling to cars and shipping, and never allow your men to handle fine lumber roughly, but in piling, loading on cars or waggon, hand the boards carefully from one to the other, and lay them down easily. You will make money by this, even if it requires one-third more men to do the work; the increased price that your lumber brings will pay all this extra expense and leave you a handsome margin besides.

BRAZING BAND SAWS.

The Hoyt & Bro. Manufacturing Co., of Aurora, Ill., gives the following directions for performing this operation.

File the ends of the band on opposite sides, to form two wedged shaped ends, having a lap of say ¾-inch long, which, when laid with their bevelled and filed sides together, shall form a good joint of the same thickness as blade. Now clamp the ends on a piece of board, with the back of the blade toward you, with the lap brought fair together. Cut a piece of "silver solder," large enough to cover the lap, lay it between the lapped portion with a little pulverized "borax." Now, having a piece cut out of your board, say three inches wide, directly under your lap, heat your soldering tongs to a bright "cherry-red," and hold them pinched firmly on the lap until the solder flows freely from under the joint, then cool off the tongs and soldered portion of saw by pouring water upon the same, without relieving the pressure until nearly cold. Try a file on both sides the blade, and should it be harder than the other part of the blade, reheat your tongs a little, and draw the temper by pressing the tongs upon the hard portion of the blade till partially heated, but not upon the lap, as it will weaken your joint. File off the solder and joint to the same thickness as other parts and the soldering of your band is completed.

COOPERAGE STUFF.

Handlers of cooperage stuff in this city comment seriously upon the character and quality of much of the staves, heading, etc., that is offered or shipped to this market. In many cases the manufacturers of the stuff do not understand their business sufficiently to turn out a product that is desirable or even available. Some owners of mills seem to imagine that if a lot of staves and heading is chopped out in a cheap way it is sufficient, and often they are not particular about the quality of the timber used. This is not gencrally the fact, but it is true to too great an extent. Instead of an indifference among users of packages as to the quality of the stuff to go into them, there is, on the contrary, a most rigid system of inspection applied. A Chicago commission man would not dare to send a car-load of stuff to a Minnesota consumer that did not come within the proper range as to quality, knowing too well that it would be useless, for the stock would be mercilessly culled. Before buying stocks of a producer to furnish to the trade catered to by Chicago operators, assurance is always wanted that the manufacturer knows what to send, and will turn that knowledge to proper account. Numerous inquiries regarding the placing of stocks are received in Chicago, to which little attention is paid, because the commission men are afraid to touch the product of a mill which they know nothing about. Improperly made stuff is disposed of by hook or crook, generally being supplied to local consumption, for there are apt to be coopers who are no more particular than the unskilled manufacturers of raw material. But at such a point as Minneapolis, to which a large amount of stock is annually shipped from Chicago, there is little demand for poor stuff. All this points to the necessity for the utmost care in studying the wants of consumers of cooperage material, and an earnest endeavor to meet those wants. When the markot is dull inferior stuff has but little show, for if stock is wanted it is easy enough to get what is good.—*Northwestern Lumberman.*

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec:—

JUNE 14.—Henry Connolly, deals, Mill cove.
Thos. Duck, white pine, &c., sundry coves.
A. Fraser & Co., timber, Clint's wharf.
E. L. Kelsey, staves, Point-au-Pizeau.
Jas. Gibson, jr., birch, South Quebec.
John S. Murphy, elm, &c., Indian cove east.
Wm. Simpson, birch, &c., Hadlow cove.
A. & J. White, white pine, &c., St. Lawrence docks.
Jos. Bolduc, deals, Mill cove.
JUNE 21.—Joseph Bolduc, deals, Mill cove.
Malcolm McDougall, white pine, &c., St. Michael's cove.
Peter McLaren, white pine, St. Lawrence Docks.
J. J. Calvin & Co., elm, &c., Point-au-Pizeau.
J. J. Calvin & Co., oak, &c,, sundry coves.
John McRae & Co., timber, Indian cove west.
D. C. Thompson, staves, Bridgewater cove.
Flatt & Bradley and D. C. Thompson, staves, Bridgewater cove.
Wm. Simpson, birch, Hadlow cove.
A. Fraser & Co., white pine, &c., Clint's wharf.
Hilliard & Dickson, pine, &c., St. Lawrence Docks.

LOGS AND LUMBER.

Last week the *Lumberman* contained an extract from the Tonawanda, N. Y., *Herald*, that uttered a bitter complaint of the decline and threatening collapse of the saw-mill industry at that point, on account of the high cost of logs. The complaint alleged that the operators who raft logs from Lake Huron to Tonawanda have squeezed the millmen to the point of bankruptcy by charging exorbitant prices for logs delivered, several of the manufacturers having failed, and the remaining ones barely holding out, while they are making nothing. In the *Herald* of the suceeeding issue a "timber" dealer, as they there call the men who trade in logs, takes issue with the complaint, and denies that the high price of the raw material at Tonawanda is the result of excessive value placed on it by the dealers. He says that the reason why logs cost more in Tonawanda than formerly is because they cost more at the stump. He cites the alleged fact that those mill owners who have undertaken to get their own logs from the woods and raft them to Tonawanda have made a failure of it, while those who have devoted their care and capital exclusively to their mills have succeeded. "The truth is," the timber dealer proceeds to say, "the enormously increased price of stumpage, amounting to over 400 per cent. in the last few years, together with the excessive price of labor and supplies to carry on the business, is what has embarrassed the timber trade, and not the excessive profits imposed by the timber dealers." And, he adds, "the writer has well nigh quit the business for this reason." So it seems that the trouble is thrown back on the stump and the cost of labor and supplies. It is the same that the Michigan manufacturers complain of; the high price of stumpage and labor, that oblige them to ask so much for the product of their mills that there is no margin left for the trade. It seems as if either stumpage were too high or else assorted lumber were too low. A just relative level will have to be reached sometime in the very nature of things.—*Northwestern Lumberman.*

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VENEERS.

This may properly be called the age of veneers. At any rate the art of veneer making has been brought down to a fine point. As adept as the grainer is, his business has fallen into disrepute, and there are prospects that in the future there will be no great demand for him. Not many years ago pine was the leading finishing wood, but now, in the finer class of houses, it is crowded out. Hardwood for inside finishing is the thing, and ingenious man has studied the problem, how to make the finishing present the appearance of being solid hardwood without being so. This effort is not one of the most laudable, for at the present time the cost of hardwood lumber is so low that if a man builds for durability, he certainly ought to feel able, if able to build at all, to use solid lumber. But so long as he will not always, the veneer makers step in and supply him with a substitute. The perfection of veneers that are turned out is remarkable. It was not long ago that the kinds of veneers were few, but one by one the different woods have been added, until now they are numerous. The veneers are cut remarkably smooth, requiring but little finish brfore being oiled or varnished, and made as thin as a hundred and seventy-five to the inch.—*Northwestern Lumber man.*

Across Lake Winnipeg.

The Winnipeg *Times* of June 19th says:—George Bradbury, the general manager of the Northwest Lumbering Co. has just returned from a trip across Lake Winnipeg from Bull's Head. At this point a raft of 300,000 feet of square timber was taken in tow by the steamer Colville, and was carried safely across and was safely landed at Selkirk. The trip was made in four days, the greater part of the time being spent at the mouth of the Red River, the water being too low to get across the bar without great difficulty. This is the first raft ever towed across the lake, and the timber is for the saw mill of the company at Selkirk.

THE *Timber Trades Journal* of June 9, says: It would have been astonishing if the fine clear weather and strong northeast winds which have prevailed for the last ten days or so had not brought into London a numerous fleet from the Baltic, for, in fact, the early spring shipments may now be considered due, and these are some of them. Fifty-four timber vessels would sound large enough for any week of the year, but no week would be likely to bring in a greater number than this, because everything favored the arrival in good time of every Swedish sailing vessel that had got her loading by May 20th and some from Norway much later. The import season may be considered fully on now, and we must expect a longer list of arrivals than we have lately been accustomed to record.

THE Toronto *Globe* says:—In a paper by Mr. Charles Gibb on "Trees and Shrubs of Northern Europe and Asia," in which he records his observations on forestry and horticulture in the fruit growing areas of the Russian Empire, the author alludes to the lack of botanic gardens in Canada. These institutions are to be found throughout Europe, even in Russia and in most of the tropical and other colonies of England, for the interchange of botanical products growing in similar climates. "That this great Dominion of Canada," he says, "which stretches from the Atlantic to the Pacific should be without a botanic garden or a series of such gardens, is a fact without parallel in British colonial history.

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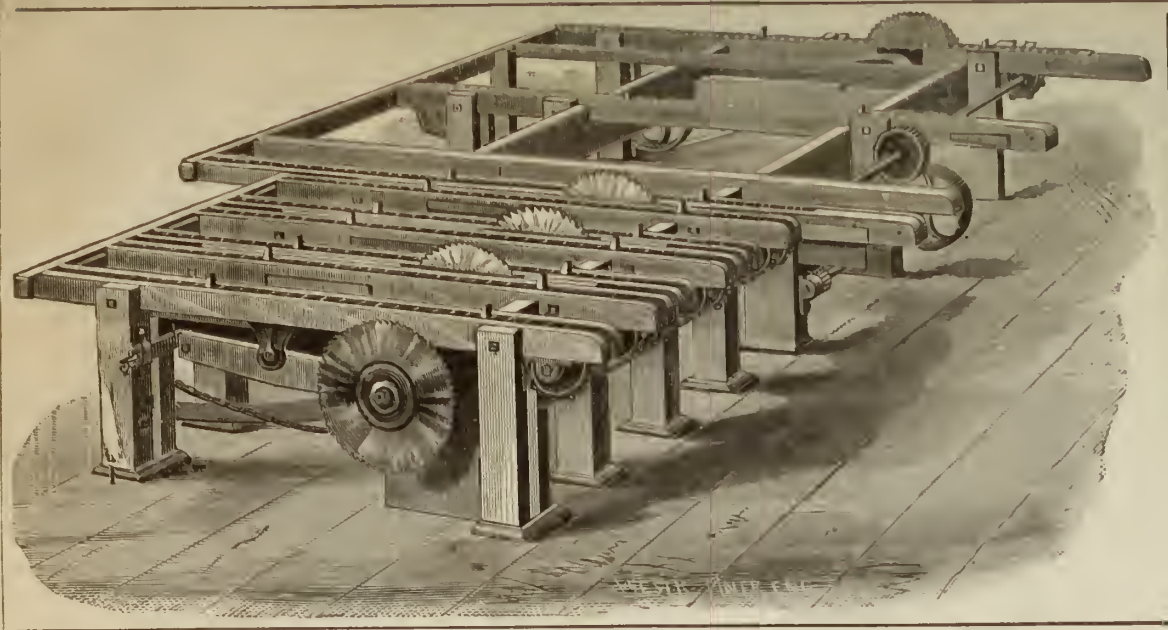

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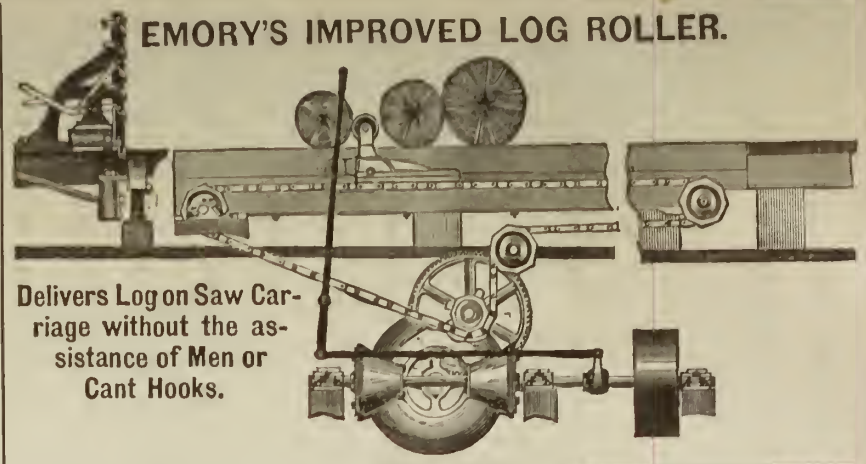

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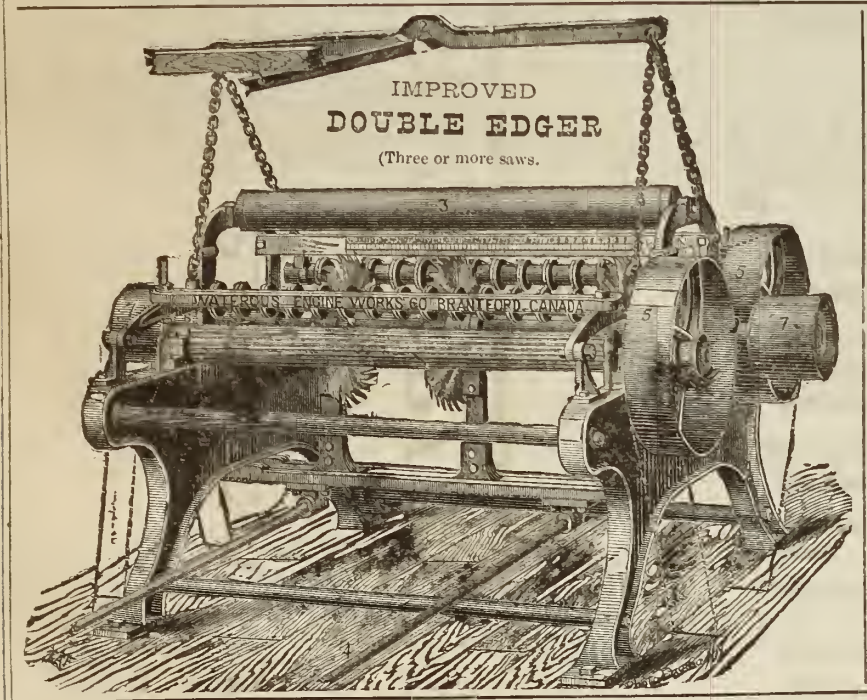

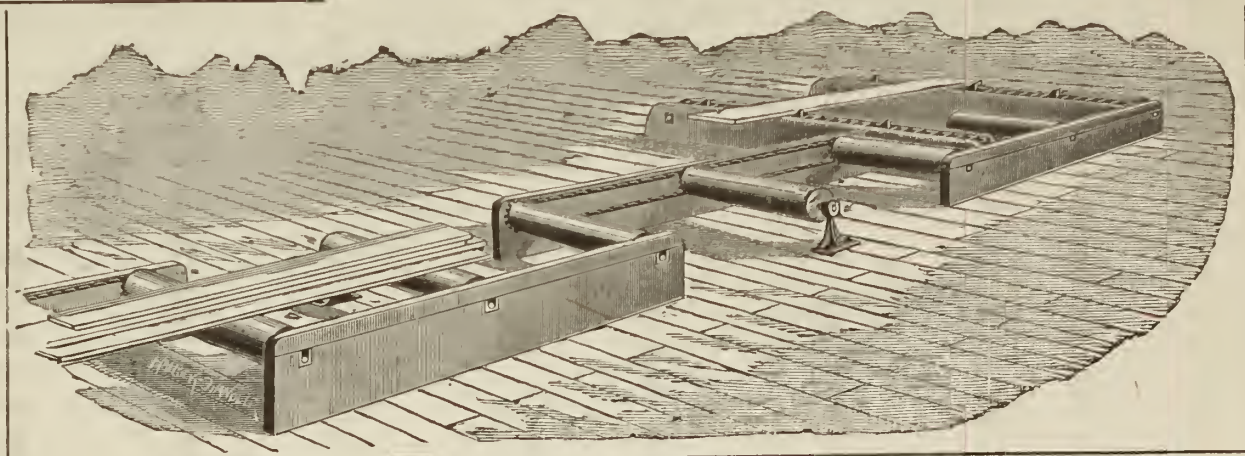

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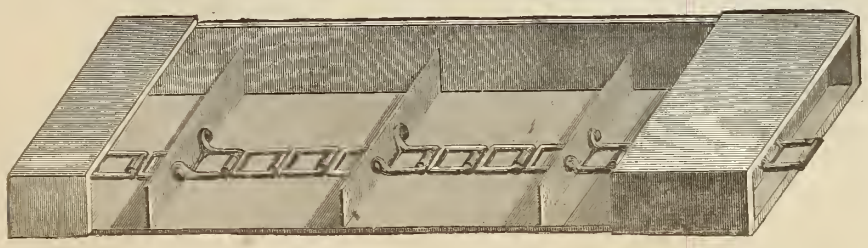

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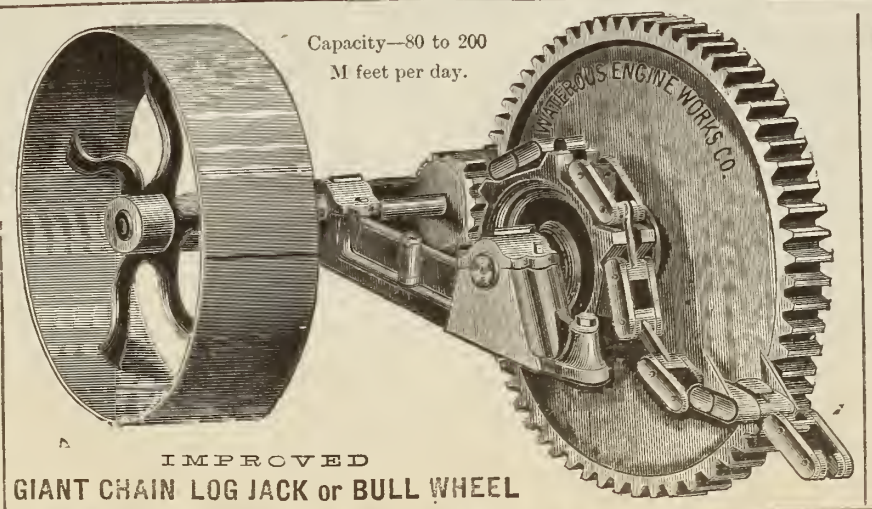

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VOL. 3. PETERBOROUGH, ONT., JULY 16, 1883. NO. 14.

PORT ARTHUR TRADE.

The lumber business at Port Arthur seems to have grown like a mushroom in a night. Two weeks ago lumber could not be had here for love or money, and now you can get any quantity of it. Since the middle of May there has arrived here, on different vessels, about 2,500,000 feet of lumber, the principal portion of it being for the Northwest. But this is only a beginning of what is to come. The barge Lothair, Capt. Symmes, with her consorts, the Staubenzie and Corrisande, have a contract for landing here, from Parry Sound, for Ogilvie & Co., of Winnipeg, 6,000,000 feet of lumber, to be used in building elevators in the Northwest. After this contract is completed he will probably continue all the season. They carry about 1,000,000 feet each trip, and it is estimated that they will land here during the season about 10,000,000 feet. G. A. Priest, who has opened out in the lumber business here, will also do an extensive business. He will have vessels running here regularly with lumber, which he will ship to the Northwest. It is estimated that he will ship through Port Arthur several millions of feet. Graham, Horne & Co., of this place and Fort William, also have their fleet of vessels, which will be constantly employed in bringing lumber here for the Northwest trade. Their shipments will go into the millions. We have heard today of another large lumber yard that will shortly be opened out here by a Mr. Wells, of Winnipeg. We understand he will go into the business on a large scale, and will ship several million feet to the Northwest during this season. With these large lumber firms operating here, it will be safe to estimate that between 25,000,000 and 50,000,000 feet of lumber will be transhipped at Port Arthur this season. And still business in this line is only beginning. The coming events are casting their shadows before, as it were. Where now are the people who a few weeks ago asked what we were going to do with our docks? The vastness of the trade that will eventually go through Port Arthur can scarcely be estimated at the present time.—*Herald.*

SAW MILLS IN THE DOMINION.

The business of sawing timber gave employment in Canada in 1881, as we learn from the census returns of that year, to 41,509 persons in 5,390 mills, at an average wage of about $200 a year each. The value of the logs sawed in that year is placed at $20,798,000, and the wages amounted to $8,146,000. The value of the product is placed at $38,569,000.

The census enumerators have located the 5,390 saw mills in operation in 1881 as follows:—Ontario, 1,761; Quebec, 1,729; Nova Scotia, 1,190; New Brunswick, 478; P. E. Island, 165; Manitoba, 37; British Columbia 27, the Territories 3.

The number of hands employed was: In Ontario, 16,846, of whom 69 were women and eight girls under ten years. In the province of Quebec 12,461 hands, of whom 37 were women and eight girls. In New Brunswick 7,175, of whom 20 were women and eight girls. In Nova Scotia 4,160 hands of whom 34 were women. P. E. Island returns 419, British Columbia 404, and the Territories 44 employes, making a total of 41,569 persons.

The following are the statistics of the annual wages, value of raw materal and value of these 5,390 saw mills arranged by provinces:

	Yearly Wages.	*Raw Material.*	*Products.*
Ontario	$3,581,223	8,985,797	16,629,075
Quebec	2,237,191	5,101,884	10,542,649
New Brunswick	1,243,628	4,355,735	6,532,826
Nova Scotia	549,480	1,446,858	3,094,137
Manitoba	208,190	513,158	885,173
British Columbia	202,420	223,961	550,321
P. E. Island	58,262	127,194	240,153
Territories	17,000	43,802	95,318
Grand total	$8,146,996	20,798,389	38,569,652

Figures of shingle manufacture are not included in this table—the Provinces standing as follows in the product of the shingle mills:—Ontario $154,803, New Brunswick $128,714, Quebec $98,130, Nova Scotia $69,344, P. E. Island $10,406, British Columbia $5,597. Commenting on the return the Montreal *Herald* says:—"The art of shingle making was either not understood or remained uncultivated in Manitoba and the North-West up to 1881. Doubtless in the manufacture of lumber of all descriptions great strides have since been taken in that quarter."—*Monetary Times.*

THE LAKE OF THE WOODS.

We take the following extract from the Montreal *Herald's* report of the interview of a reporter with Major Lewis:—

"Is there a good timber country east of Winnipeg?" was asked by the *Herald* representative.

"Not until you reach," Major Lewis replied, "the Lake of the Woods or rivers and lakes connected with it. Of course, Lake Winnipeg is renowned for being plentifully supplied with spruce, but, in order to get red or white pine, you must go to the Lake of the Woods or east of it, and then it is only found in very small quantities, and in groves or bunches."

"Is the timber of large size such as we usually cut in Ontario?"

"By no means," the Major answered, "but I think it is sounder and better, although smaller, and will average, *per centum*, more stock lumber.

"Why is it that there are complaints about the want of lumber if the timber is there as you say."

"In the first place because millions upon millions of the timber have been burnt, I think chiefly on account of the carelessness of travelling Indians lighting fires. Some people think that the destruction has been caused by lightning. This may have occurred in some localities, but it never could have caused such wholesale destruction as has taken place, as the country shows evidence of. In the second place, on account of the great expense that pertains to the getting out and manufacture of timber, aside from the fact that there is no permanency in the present regulations, that would justify a capitalist in investing his money.'

"Are there any facilities at or near the Lake of the Woods for the manufacture of lumber?"

"Yes, we have at Rat Portage on the Canada Pacific Railway, mills, steam and water power, as fine as there are in the world, with all the latest improvements."

"Does Rat Portage possess any natural facilities for manufacturing purposes?"

"It not only possesses an immense water power, which is now being used for a large paper mill, but, I have been informed, will, in a very short time, be utilized by the Hudson Bay Co., for the working of the largest grist mills in Canada. In addition, I may say, that Rat Portage is destined to be the watering place of the whole great Northwest. There will be many who will go to Port Arthur, which in my opinion, will be the Chicago of the Northwest, but for real pleasure, canoeing, boating, tenting and fishing, the Lake of the Woods is *par excellence* the place there."

HEAVY IN HEMLOCK.

F. Shaw & Bros., with headquarters at Boston, are said to be the greatest manufacturers of hemlock extract and tanners in the world. They own seven tanneries in Maine, an equal number in Canada, besides six large establishments in Maine and New Brunswick, for the manufacture of hemlock extract. Two years ago, they owned or controlled 14 tanneries in Canada, but, as bark grew scarce they gradually closed their works there, until but six are now in operation. The location and capacity of their tanneries, as given by the *Mining and Industrial Journal*, of Bangor, are as follows: Grand Lake Stream, 700 vats; Kingman, 550; Vanceboro, 500; Jackson Brook, 400; Forest City, 300; Lincoln, 200; Princeton, 100; total capacity, 2,700 vats. Their extract works in No. 39, near Burlington, consume 8,000 cords of bark yearly; in Houlton, 5,000 cords; Sherman, 6,000; Woodstock, N. B., 7,000; two sets of works on the St. John river, 6,000 each; total, 38,000 cords.

The same authority says: The tannery at Grand Lake Stream is said to be the largest in the world. The buildings consist, first, of a drying house for the leather, 80 feet square and eight stories high. Connected with and running north from this is the building containing the 700 vats, which is 600 feet long and 80 feet wide. Adjoining this is the bark mill, leach room, and furnace room, 220 feet long; and running eastward from the dry house is a building 225 feet in length, which contains the dry hide and finishing rooms. There are 13 steam boilers and 12 furnaces for burning the waste bark or tan. The motive power of the establishment is furnished by six water wheels and three steam engines. The works run night and day, the year round (Sundays excepted), and the premises are illuminated during the night by the Edison Electric Light. The firm has its own saw mill, which furnishes all the lumber required in the construction of its factory buildings, and also all the houses in the village occupied by its own and other laborers. It has steamers on the lake for towing its 12 scows, which bring in about 100 cords of bark daily, that which is not required for immediate consumption being stored for winter use. The bark required for tanning the leather must be got out a year ahead, and the firm has at the present time some 11,000 cords of bark—peeled and yarded in the woods last year—which it is now bringing forward in its scows for this summer and next winter use. As an illustration of a single item of expense in running this tannery, it may be stated that this bark is valued at $7 per cord. The company has a single pile of bark, up the lake, containing 4,000 cords.

This immense establishment turns out 1,000 sides, or about nine tons in weight, of finished leather every working day of 24 hours. To produce this quantity of leather requires the grinding and consumption of 40 cords hemlock bark, in connection with 15 barrels of hemlock extract, equal to 15 cords more—or 55 cords daily. South American hides are mainly used. —*Northwestern Lumberman.*

THE lumber trade of St. Paul, Minn., in 1881 was reported as having amounted to $1,348,000, and in 1882 it rose to $3,439,522, thus gaining more in one year than all the previous years of St. Paul's existence.

THE city council of Pueblo, Colo., has received a remonstrance against cutting down a cottonwood tree which is 26 inches in circumference, and probably 1,000 years old. It is regarded as the largest and finest cottonwood in the state.

A large elm tree growing at Norwich, Conn., is over 70 years old, and the limbs are 30 feet from the ground. It stands alongside a house, the chimney of which has been swept away by the overhanging branches, while the tree has raised and moved the house one foot by the force of its growth. A similar instance has occurred at Nassau, New Providence, one of the Bahama Islands. A cotton silk tree growing there has attained such mammoth proportions that it has actually lifted a large Government building.

FORESTRY IN GERMANY.

A writer in an English paper treats this subject as follows :—"Forests in Germany were originally common property, ownership of forests being unknown. Of the lands suitable for agricultural purposes each one took possession yearly of a fixed portion for cultivation. From the forests, however, each one took as much as he desired, and from wherever he pleased, excepting those groves which were set apart for religious purposes. Traces of the ownership of forests by private persons are found in the sixth century. At this stage of proprietorship, one could only claim particular woods, and prohibit the use of the same by others, unless the felling and using of the timber had actually commenced. Mr. Zimmerman, the United States Consular Agent in Berlin, states that the earliest forest properties were so-called privileged forests. By privileged forests are meant such as were the property of emperors, kings, princes, and other rulers and nobility. The privileges at first extended only to the exclusive right of hunting, fishing, etc., in the forests ; but later complete control of them was claimed, and they were appropriated by the nobility, and held as property belonging solely and entirely to themselves. In the earliest times traces of forest protection and preservation are to be found. In the middle of the thirteenth century a penalty of three 'schillings' was attached by law to the cutting of wood in a forest without permission. After the privileged forests came the private proprietorship of forests, then the county forests, and lastly the state forests of to-day. The laws and regulations under which the utilization of forests was most justly and equitably permitted, occur between the years 1500 and 1800. Proper management of forests and discretion in felling the trees first began to be practised in the mining districts. Then it was necessary to have at hand the wood absolutely required there in connection with the working of the mines, and the mine owners were compelled to preserve the existing forests. After the mining districts the forests in the neighborhood of cities and towns began to be cared for. The 'Erfurt' forest economy dates back as far as 1359. In the Nuremburg district in 1368, and in the Frankfort-on-the-Main district in 1423, the planting of the pine tree was introduced.

"The first forest schools were established in Germany about the year 1717. They were so-called high schools, in which certain district officials (Revierverwalter) were the teachers. These schools were at first self-supporting ; later, they received assistance from the state, or were made state forest schools or academies. Thus, forest academies were established at Dreissigacker in 1801 ; Tharandt in 1816 ; Nelsungen in 1816 ; Aschaffenburg in 1820 ; Hohenheim in 1820, and at Eisenach in 1830. To each of these academies three professors were detailed for duty, one to instruct in forest economy, one in natural history and science, and one in mathematics. In Baden, forest culture was added to the list of subjects studied at the Polytechnic Institute at Carlsruhe in 1832, and in 1838 the same was done at Brunswick. A chair of forestry was established at Giessen in 1825, and later also at Heidelberg, Munich, Tubingen and Leipsic. At the last three, however, because of the forests being too remote for the practical instruction necessary for a student of forest culture to have, and for other reasons, the subject was dropped. In Prussia, the incitement to the study of forestry came from the state. From 1770, on the proposition of Minister Van Hagen, lectures on forest botany were delivered at Berlin, and excursions into the forests were made for the purpose of examining on the spot the subjects treated in the lectures. In 1821 a forest academy was established at Berlin in connection with the university there. This academy was, in 1830, removed to Eberswalde, where it now is. The instructors at this academy consist of the director, three master foresters and five professors, and the subjects taught are as follows: Forest culture in general, method of forest appraisement, the manner of keeping and rendering accounts of incomes received and expenditures made on account of forests, the protection of forests, utilization of the same, and huntsmanship, history of forest culture and statistics relating to same, geodesy and draughting, mathematics, physics, and mechanics, botany, zoology and entomology, mineralogy, geology and chemistry, and Prussian civil and criminal law. Excursions are made into the forests three times weekly, and lectures and practical demonstrations are then given. In 1868 a second Prussian forest academy was established at Minden on the same principle and with nearly, if not quite. the same course of instruction. In the opinion of Professor Daukelmann, of the forest academy of Eberswalde, a re-organization of this course of study will take place within the next ten years, so that forestry subjects alone, such as preservation and cultivation of forests, botany, zoology, etc., will be taught at the forest academies, and general or relative subjects, such as geodesy, draughting, mathematics and law will be made a separate course for the forestry student at a university. Before admittance to the forest academy can be obtained the applicant must be over twenty years of age. He must also have certificates to the effect that he has passed the requisite final examinations at a Prussian gymnasium or 'realschule' of the highest grade, that he has passed examinations as *eleve* forester, and that he has a good character, and also the means necessary for his subsistence while studying at the academy. A thorough forester, in Prussia, is an adept in natural history relative to forests and their inhabitants, at the same time a geologist, botanist and chemist, and the possessor of a good general knowledge of the laws of his country. He knows every foot of land in his district, at the various stations he notes the rainfall, the force and direction of the prevailing winds, their humidity and dryness, the temperature, etc. For the encouragement and assistance given to these men by the state, the return made by them in the management of its forests interests is of the greatest value. The Prussian forestry corps at present consists of 1 chief general master forester, 3 general master foresters, 30 chief master foresters, 1 forest director in Hanover, 93 master foresters, 685 chief foresters, 3,351 district foresters, 356 forest keepers, and 70 minor officials."

THE U. S. LUMBER TRADE.

Bradstreets in a recent issue discourses thus on the lumber trade. The lumber interest of the country, second only, it says, in importance to that of iron, represents an annual output exceeding eight billion feet, of which amount Chicago, the leading market for the vast pineries that crowd the northern slopes of Michigan and Wisconsin, distributes one-fourth. The consumption of lumber tends to increase in the eastern, middle, western and southwestern states, and following on this progressive demand and augmenting cost of securing supplies is a general advance in price. The Chicago dealers testified before the Tariff Commission that the average has risen from $9.63 per thousand feet for the three years 1877, 1878 and 1879 to $11.63 in 1880, $13.92 in 1881, and over $14 in 1882. It is difficult to imagine a great industry like that of lumber suddenly arrested for want of supplies, but the most reliable authorities place the period of comparative exhaustion at fifteen years. The estimate of ten years formerly entertained was based on the amount of timber which would yield not less than 20 per cent. in grades common to fine, when government selections were neglected even at prices of $1.25 to $2.50 per acre ; and no pine timber was considered worth cutting which measured less than sixteen to eighteen inches diameter at the butt ; when the logging district of Michigan and northern Wisconsin was almost unknown, and the merchantable timber of the south, now extensively made available by railway connection, was underrated. The encroachments, however, on the pineries of the west and south-west, cannot be made good, the land being too serviceable for agriculture, while in the south crops of cotton, sugar, tobacco, corn and oats prove far more profitable than timber growing. Each year timber has to be sought further back. After damming up every available creek by which the logs could reach the rivers, logging railroads have been constructed to the water. The process of denuding lumber lands is hastened by the "butchering" going on to supply the quantity demanded by the various mills. Did lumber command a far higher price much of the timber brought to market would be reserved for further growth. It is a common saying that not one tree in four, owing to inherent defects, is suitable for logs. Anticipatory of future requirements, and with the prospect of heavy advances in price, large sections of land containing choice descriptions of white and yellow pine are, with a limited extent of hardwords, being bought up to hold by eastern and New York capitalists. Of the profitableness of such investments there can, of course, be no question. The forthcoming failure of supplies exercises no immediate effect on the market ; the probable and actual supply of each successive lumber season is the main concern of the trade, the future being left to take care of itself. The general policy of the lumber trade is to buy for the present demand, based on a large supply and in this it is pursuing the same course as last year. As to outside resources, Canada offers immense supplies. Nova Scotia and New Brunswick will long continue their exports of spruce ; Mexico, with her rich timber lands of qualities of wood suited to this market, including walnut, ebony, mahogany, oak, hard cedar, hickory and sycamore, promises in no long time to be an important source of supply, as railroads, cutting through her forest reserves, are now being rapidly built under the influence of state and government concessions.

Among the influences operating on the course of trade, and slightly affecting prices, are the rates of freight between competitive points. The opening of navigation on the lakes is always the signal for material reduction by the trunk lines between the west and east. Freights on the lakes this season are somewhat lower, while canal transportation has risen, owing to the successful demands of the boatmen for higher wages. Railroads are getting more into the lumber trade than formerly through trunk lines reaching wooded belts previously untouched, the building of new lines depending as a source of revenue on lumber traffic both for neighboring consumption and distant shipment, and the extension of tributary lines to the ever receding sources of supply.

PRODIGIOUS PINE TRANSACTION.

In this country we are becoming familiar with immente pine land transactions, and sales involving hundreds of thousands of dollars have become common occurrences. A recent sale of pine lands, however, by the Mobile and Ohio railroad is so enormous, involving three quarters of a million acres, that we give a full description of it, with the aim and purposes of the purchasers, as furnished by the *Mobile Register*, whose reporter interviewed Mr. Danner, one of the contracting parties :

"A. C. Danner & Co., have purchased," said Mr. Danner, "all the pine lands of the Mobile and Ohio road. These lands lie in the counties of Washington, Mobile, Choctaw, Clarke and Baldwin, in the state of Alabama, and in the counties of Wayne, Greene and Jackson, in the State of Mississippi. These lands comprise about 750,000 acres, extending about 15 miles on either side of the Mobile and Ohio road. Some of the land is tributary to the Pascagoula mills, and some to the Bigbee river. It is all tributary to the road which runs through them."

"What sort of lands are they ?"

"Mostly good timbered land. Along the road a good deal has been boxed for turpentine, and a small portion of the land has been cut over. The depredations have been considerable, but lying back from the road is a quantity of the finest timber in the country. All the land is rated above one dollar and a quarter an acre, and some of it is a good farming land which has been held by the road at five dollars an acre."

"What is the object in buying this vast quantity of land ?"

"My main object was to secure plenty of timber for mills. People are around picking up lands here and there, and there was danger that some day I might find myself like the negro with the pocket book with no money to put in it. I wanted enough timber to last me my lifetime, and now I have got it."

"What was the railroad's object ?"

"The railroad wanted to get rid of the land and the depredators at the one time, and it sold to my firm. We think we can stop the depredations and make those who have depredated pay for what they have taken. If we can't get the money, we can bring a criminal suit against them and against those who have received the stolen property."

"And how do you propose to utilize this vast territory ?"

"We expect to form a land and lumber company to be known as the Danner Land and Lumber Company, and will use up as much of the lumber as we can. We will build several mills along the line of the railroad, with tramways running into the heart of the best timber country. We think we can utilize a great deal of this territory." Here Mr. Danner unrolled a map showing the land divided off into sections and colored to show to what extent the purchase has been encroached upon. This map shows that about one-half of the 750,000 acres is virgin forest. A quarter has been more or less turpentined and another quarter has been more or less cut. "This is a pretty big enterprise," suggested the reporter.

"I believe," answered Mr. Danner, "that it is the largest sale of pine lands ever made to one firm. You have perhaps, an idea of the size of 750,000 acres. Well, it is a trifle less than the area of the State of Delaware and something more than the area of Rhode Island. The lumber business is becoming better systemized and the time is passing when a man with a thousand dollars and any sort of a saw mill can succeed. The mill men will have to own the timber and we are but taking a step now which in a few years will become a necessity. We shall, of course, put our other land into the company, and may consider ourselves amply provided with material."

"How much land will the company own ?"

"About eight hundred thousand acres."

THE WASTE WOOD IN SAW MILLS.

The following letter appears in the London *Timber Trades Journal* and may suggest ideas to our own saw mill owners :—

SIR,—I have machinery fitted up for the chair trade, but have not sufficient work to keep it going. It consists of a portable rack saw bench, a plain circular saw bench, 42 in. band saw machine, and lathes, all driven by steam. This is a beech wood country, but it is dear. We are fairly supplied with ash and oak of good quality, also fir. Elm is rather scarce, but it can be got at. Can you indicate to me any way by which I can manage to work full time by the manufacture of small work to use up the waste wood from the chair works? Such things as spools and reels for cotton have occurred to me. What prospect do you think there is for oak spokes, ash handles, packing cases, or toys ? In a country place like this we are not able to find out what uses and purposes wood can be applied to—Yours, &c., H. T.

[There are no doubt some of our readers who can assist "H. T.," and we shall be glad to forward any letters to him that may come to hand. This question of the utilization of the waste wood is one of great importance to proprietors of saw-mill and other wood-working establishments, and we invite correspondence on the subject.—Ed. *T. T. J.*]

A WOODEN COSTUME AT A CARNIVAL.

A very unique costume was made for the use of Mr. Charles H. Reed at the Olympian Club carnival, says the Boston *Globe*, the entire outfit of dress, boots, mask, wig and parasol being of wood. Mr. Reed wore a costume representing half man and half woman at the last carnival, but at this one will appear in full lady's attire. The chief garment is a princess dress made of various kinds of Spurr's papered veneers. It has a brocaded front and basque and trimmings of knife-plaiting, fichus and loops of wood ribbon, and it is ornamented with rosettes and leaves in wood of various shades in their natural colors. At the sides there is a substitute for embroidery in inlaid work of fancy designs. The sleeves are of cork paper, trimmed to imitate puffing, and at the bottom is a deep border of black walnut knife-plaiting The boots and gloves are of birch bark, and the mask of matched woods with a fringe of plaiting. The wig is

composed of about 100 curls, consisting of white pine shavings artistically grouped. The parasol is of Chinese pattern, covered with vari-colored veneers and similiarly lined. The effort has been made before to make a dress of wood, but without success. This attempt is thoroughly successful, the effect of the different kinds and colors of wood in the combination being very striking and artistic. The veneers are so thin that the costume is not very heavy, and so flexible that it is not liable to injury.

POSSIBILITIES OF PAPER.

An exchange says :—The daily papers notice, occasionally, some newly discovered use for paper, paper taking the place of wood in cabinet work, in joiner work, superseding iron in some instances, used for building material to withstand the action of the elements, and even for railway sleepers. Some of its recent applications are of importance enough to be recorded, but in many instances paper receives credit that should be shared by other materials. Paper, itself, is simply a vegetable pulp, mode coherent in sheets, or "boards," by the aid of glue, sizing, or similar material, and compression under rolls. It is subject to the action of moisture, and is more or less combustible. Evidently, to resist the elements and heat, it must be subjected to changes from its original character. These changes are induced by a mixture of other materials, to such a large proportion in some instances that the paper pulp is only the matrix, or gauge, holding the other substances in connection and form. Plaster of Paris, whiting, ground asbestos, and even clay, are among the materials that may be incorporated with paper pulp to change its nature, and fit it for peculiar and unusual service. Paper is waterproof by saturation in tar, and thus resists, for a time, the pelting of storms. Some descriptions of wall-paper hanging are surfaced with clay, that not only gives a glossy finish, but also makes the paper partially resistent to the action of flame. It is possible, undoubtedly, to so charge paper pulp with an incombustible material as to allow it to be used as a chimney flue. Even without the addition of foreign material, the paper pulp is formed, by immense pressure, into barrels for merchandise, the body of car wheels, and other articles requiring great stiffness combined with lightness. Paper mache, a union of paper pulp and glue, and subjected to pressure, may be made almost indestructible when the surface is defended from outward attack by a proper enamel. The possibilities of paper pulp treated for particular uses is suggested by occasional additions to its employment seen in the markets. No two uses could be more directly opposed than vessels for holding water and articles for resisting fire ; yet paper pails, wash-basins and other similar utensils are common, and excellent tobacco pipe bowls are made of paper. In the first instance, the material is defended by a water-proof paint or varnish, and in the other the pulp is mixed with ground asbestos to resist the heat of the lighted tobacco. These possibilities may be greatly extended, a paper pulp charged with other materials yields steadily to pressure in moulds, as well as to formation in sheets between rolls. There would appear to be no obstacle to its extended employment in interior house finishing as doors, door-frames, mouldings, etc., and the framing for furniture."

AN INNOVATION IN PULP MAKING.

A new machine for preparing wood fibre for pulp, invented by a Gardiner, Me., man, is described as follows :—The purpose of the machine is to shave the wood off so finely that it is ready to go into the paper engines. It takes a piece of log 12 inches in length, which is revolved at a speed of 1,000 revolutions to the minute. A sharp cutter shaves the log, taking off a shaving so thin that it would take 750 of them to make an inch. As it takes about 200 sheets of ordinary paper to make an inch, one can judge somewhat of the thickness of the fire made by this machine. The knife has a sliding motion, and gradually moves forward as the block decreases in diameter. In the first machine made, the principal trouble was found in keeping the knife sharp. As the knife became dull the fibre turned off became of uneven thickness ; but this has been remedied by an ingenious arrangement of whetstones that keep constantly at work on the knife while the machine is at work. The pulp the machine makes has not been tried upon the better class of paper, but it will work on the coarser grades, and the inventor is confident it will also be practicable on better grades. If it proves so, it will result in a great change in the manufacture of pulp. It makes it much faster, besides saving labor, and the saving in cost of transportation, the pulp being dry and therefore with no water to pay freight on, will be a good profit.—*Northwestern Lumberman.*

Mahogany Spurs.

A noticeable peculiarity of the mahogany tree, of which very few have knowledge, is seen in the numerous spurs, which are thrown out from the body of the tree, at regular intervals from the ground up the tree to the height of 12 feet or more, all of which grow downward like roots and finally enter the earth and become real roots. These spurs, often from 12 to 16 inches in diameter, are incomparatively superior to any part of the trunk for beauty of texture and color. These spurs are rarely cut by the loggers, on account of the great labor necessary, to avoid which the axemen build a hasty scaffolding of sufficient height, to enable them to cut off the tree above the spurs. So highly are these secondary roots valued for their beauty of grain and color, that of late years dealers are having them cut for the market, as an extraordinary prize. Some of these mahogany spurs have been sold for $250 per 1,000 feet, board measure, while the body of the tree brought but $40, at the port of exportation.

A Full-Fledged Saw Mill.

It is an interesting sight to witness a large full-fledged saw mill in working order. Logs come in at one end and go out of the other sawed into lumber, lath, pickets and shingles, while the refuse not worth sawing goes by means of elevators into the huge burner, where it is consumed. The slabs suitable for wood are hauled away and piled. Thus this process goes on day after day, until the close of the season, when a fresh campaign is inaugurated and crews go into the woods and chop down the monarchs of the forests, preparatory for another season's sawing. How long will this business last? Many years yet, but the day will come when 400,000,000 feet of lumber will cease to be sawed on the Menominee in a single season. Other industries ought to be started up and the resources of the upper wilds be fully utilized.—*Menominee Herald.*

A Boom Promised.

The Buffalo *Lumber World* says :—It is predicted that there is soon to be a boom in the timber lands of the Canadian Northwest. The *Lumber World* some months ago mentioned the probability that American capitalists would invest largely in Canadian timber lands, and it is now reported that American buyers are actually selecting the best and most accessible tracts of timber land in Manitoba. A thorough exploration of the section about upper Lake Winnipeg is to be made, and if its results are satisfactory, heavy purchases will probably be made. It is claimed tha the finest spruce limits in the Northwest are to be found about upper Lake Winnipeg, a section where forests have yet been scarcely touched.

Then and Now.

The Orillia *Packet* says that Mr. John Knight, Manager of the Medonte Lumber Company, and Mr. Haddon, of Fox Mead, took a saw mill from Hamilton to Fort Garry, some twelve years ago. Then they would not take the whole country as a gift, because there was no means of ingress or egress. Now the immigrant may travel from Liverpool to Winnipeg in twenty days.

We have received an admirable little work "The Woods and Timbers of North Carolina," by P. M. Hale, published by him at Raleigh, and by E. J. Hale & Son at New York. It contains a mine of valuable information and is another proof of the growing interest in such subjects. An excellent map of the whole adds to the value of the work. Such descriptions of the forest wealth of the various districts of North America would be of great public service.

M. Violette's experiments on the action of steam on wood show that certain temperatures improve the tensile strength of the wood. Thus elm obtains its maximum point of strength at a temperature between 150° and 185° cent.; oak receives an increase of strength of five-ninths, fir two-fifths, ash two-thirds, walnut one-half, the temperature in these cases varying from 225° to 150°. Other processes of artificial drying, based on a heated blast of air, have been used with more or less success.

An Ottawa despatch of July 9th says :—The lumbering business is progressing well this season. Owing to the water being so high, there was no trouble this season in drawing the timber into the main stream. The cut of square timber last winter was a very large one, and numbers of rafts are now on their way to Quebec. They will reach that market earlier this year than formerly. The demand for square timber is quiet as yet, but the market, it is expected, will revive in the fall. It is thought that not so much square timber will be cut in the limits during the next season as in the past winter.

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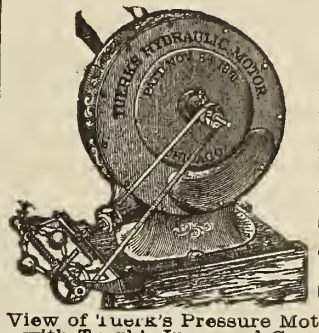

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WHAT THE BOARD OF TRADE RETURNS REVEAL TO US.

The *Timber Trades Journal* of June 16, says: In the returns under consideration there is nothing very reassuring. Nor is there much to lament over. Our imports have slightly increased, on the whole, but the timber trade is innocent of all participation in that excess, which is, however, too small to be of any importance. The total value of our imports for the month was £36,257,443, against £35,935,954 the May previous, the difference boing only £312,488, or less than 1 per cent.; whilc our exports are not materially changed either, though the difference is on the wrong side. Last May, that is in 1882, they were valued at £25,421,000, this May at £24,851,000, the difference being but £570,000 on the month, or about 2 per cent. on the total; which, when we consider that an enormous business is still doing, and that some trades fluctuate materially at different periods of the year, might easily be accounted for without signifying any general downward tendency. But unfortunately it is below the average of the previous months of the year, and must therefore be taken to prove that the favorable turn we are all looking for has not yet demonstrated itself.

The difference may be said to be accounted for entirely by the lessened value of the woollen goods exported, for, though there are considerable fluctuations in other articles, they pretty nearly neutralize each other. For instance, in metals there is a deficiency in the export of iron, tin, and copper of £260,000, but an increase in machinery of £211,000, and arms and ammunition £68,000, &c. We need only touch on the salient items and general tendency of these returns, as the particulars have been discussed by the daily press before our chance to notice them came around. It is remarkable, however, that the trade which employs the largest quantity of shipping tonnage very seldom obtains any special notice in these monthly revelations, so that what has to be said therenent usually appertains alone to this *Journal*.

If there were but a reasonable resuscitation of trade, the timber returns of the Government officials would appear sufficiently encouraging. We may account for a certain degree of business dissatisfaction by the numbers contending in almost every branch of trade, which has the effect of subdividing it into so many minor establishments that, though much is doing, few individual firms, in proportion to their staff and appointments, are doing a great deal. But when we find that the timber import of the country itself is diminishing, that, in fact, though the number of people competing in the trade is increasing, the business they do, as a whole, is smaller than it was a year ago, then it must be admitted that the dulness of trade has a deeper foundation than the number of competitors in it accounts for; and that appears to be the case with the timber interest now.

It happens, however, from the position of the trade itself, that this curtailment is not an evil at the present time. It is a consequence of the action of the import merchants themselves, and though indicating some restriction of trade, has the recommendation that it does not load them, as last year, with superfluous stock while they are still tolerably well supplied for the requirements of the country. It would be more satisfactory on the whole, perhaps, to see the trade expanding instead of pulling itself together, as the phase goes, but to find our wharves groaning under accumulations of wood goods for which the retail dealers seemed to have no room, and trade altogether more quiet than usual, would make but a gloomy prospect for the importer of the property. We might see greater figures on the import side without corresponding benefit to the merchants importing,

In May we called attention to the fact that the importation of foreign building timber up to the end of April was some 127,000 loads behind that of 1882, to the same period of the year; but the falling off in May was still greater, as the importation was short of that of May last year by 140,534 loads, so that up to the 31st. the total deficiency of the quantity imported at that date is 258,111 loads. Now this amount of timber, though very great, is not any considerable portion of the British annual supply; but, at any rate, it is equal to about 5 per cent. of it, and assuming the total to average yearly about 5½ millions of loads, the first five months of 1883 have left a gap to be filled up of more than a quarter of a million loads. Now we are quite aware that this apparent deficiency—for it is so by comparison—may vanish away in a single month, because, on some occasions, such as occurred last year in the month of August, when over 900,000 loads came forward, exceeding the supply in August, 1881, a year of large importation, too. by about 180,000 loads—such a quantity is not a third part of a month's supply. But this is just the reason why it is reasonable to suppose it will remain in arrear. The supply was so full last summer that this season is not likely to surpass it, and a full importation henceforward cannot be expected to do more than keep pace with it; and what state of affairs may rule in the autumn it is too early yet to discuss, but the same reasons that ran up freights last fall are in existence still, and the later months of the year may find the import of timber checked, as it was then, for the American harvest is likely to be a plentiful one, and it is to Europe they look for their principal market, which will tempt ships away from the timber trade.

It will, therefore, during the summer be almost a matter of simple calculation that the state of supply, if it does not further recede, will stand at about a quarter of a million behind last year, a difference that may be safely predicted to hold good to the end of September, and it would not surprise us if the marginal difference were increased in the same direction, though great efforts are being made to induce English importers to extend their purchases abroad.

There is one peculiarity in the Board of Trade returns which we should have noticed in its right place, but we may interlope it here rather than pass it over unnoticed. This country had to pay in 1881 and 1882 for corn food, and potatoes from foreign parts, a little over £23,000,000. For eateables and drinkables altogether about £61,000,000, from January to May inclusive. This year, for cereals and potatoes only, we have already paid £6,000,000 sterling more than ever before; and this largo sum going out of the country for what appears to be a supurfluity of food, instead of being spent at home, may have something to do with the depression among British agriculturists. If the Chancellor of the Exchequer were to put an additional tax upon us that would fetch him in another six millions of money the whole country would be loud in his condemnation. Yet, somehow or other, we have been made to pay that immense sum for more catables, when we had plenty for our money in the preceding years, and did very well without enlarging our sale of dietary. The effect of this extra draw on the public purse must be injurious to the farming interest at home, and that is reflected back on trade generally. It is believed that it is beneficial to the people at large, but it may be reasonably doubted if it does not make trade harder to live by here than ever it was before. Food is cheap and plentiful among us, yet we covet it so much that to propose to check its importation by a small duty is regarded as worse than high treason. But in America their only anxiety is how to get rid of it, and by-and by, with this immensely increasing influx, we shall have to find some new market and become corn exporters ourselves. Our merchants have been doing something in this way to the extent of about three millions, including drinkable, for the first five months of each year. But, with the increasing imports of this season, our exports of commodities was only slightly augmented. Strange that those who resent the idea of a duty on the import of corn, which might lessen the quantity brought in, have no objection to offer to its being sent away again, if a market can be found for it elsewhere.

That trade is still in a very unsettled condition the returns under consideration do not contradict. But neither is there anything in them that can be regarded by the timber trade in particular as affecting their interests prejudicially. Abbreviation of the importation is shown to be, so far, continuous, and that under the circumstances will be counted a positive good. Had it taken the course of the corn export from America (which was not any more needed in this country that we can hear of), the mischief it would have done, it will be more easy to imagine than describe. We cannot tell what is before us, but of such a calamity it is not apparent that the trade need be under any apprehension during the rest of the current year.

CARE OF SAWS.

Ewing D. Craddock, in a letter to the Cincinnati *Artisan*, says:—The saw is one of the most essential and sensitive tools used. A saw, to do the work that is required of it, should be kept in a condition to do the work. First, the saw should be well balanced on the mandrel and hang true, presenting a straight face on the log side; hang the saw plumb up and down: second, keep your saw well pointed, so that every tooth will do the same amount of work that is required of it; these are the first elements of successful mechanics; these, too, should always be closely observed; third is the shape of the teeth, to which, as a rule, but little attention is paid by the majority of sawyers. Every man has his own ideas about putting his saw in order; therefore all cannot be right. My idea is this; A saw tooth should come in contact with the kerf that is to be removed at an angle of 45 degrees. This will produce a thin cutting edge, and will be found to produce the desired result, cutting with the least power, and to economize power is a matter of interest to all. It makes the lightest running saw. As to swaging the teeth, or spring them, I sometimes run one, then the other, but the spring-tooth is, by far, the lightest running, and cuts smoother lumber. The full swage, with plenty of power, will do as good work as any. The objections I have to the full swaged tooth is that it takes more power to drive it; consequently there is more strain on the plate of your saw; besides, it cuts more kerf than the spring-tooth, making your saw more liable to buckle. All sawyers know the wider the kerf the more power it takes to drive the saw, and the less feed can be carried; but a spring-tooth will cut a quarter less than full swaged, and, as a matter of course, makes the lightest running saw. Still, each tooth cuts the same distance into the timber, and, therefore, I recommend the spring-tooth. I always spring the teeth at the extreme points, to prevent them from losing the set, for the nearer the point a tooth is set the longer it will retain its set; and file the under sides of each tooth a little beveling, say, 12 or 15 degrees, and the back straight, and you will find this kind of dress will give satisfaction in all kinds of timber. In this country, most all the sawyers run the chisel-tooth, or, as some call it the full swage, no set, and meet with good success. The reason of this is that a full swaged tooth is easier filled than a spring-tooth. Yet a spring-tooth does not require half the work to keep it up that a full swaged one does, and will make great saving in files and emery wheels.

CEDAR.

Cedar timber, which a few years ago was entirely ignored in calculations as to the value of land in the northern portion of Michigan, has now obtained a rank among the valuable timbers of the state.

Thousands of acres of land from which the pine has been cut have been allowed to revert to the state in years past because considered of insufficient value to admit of taxpaying, on which hundreds of thousands of cords of cedar was standing, and which at the present time is of inestimable value because of the demand which has sprung up for cedar for railroad ties and fence posts and fencing, telegraph poles and paving. The former owners of these lands now comprehend their shortsightedness, and realize that other men are reaping fortunes from that which was discarded by them as worthless because of the then prevalent but foolish idea that the pine lands of the northwest were valueless, except for the standing pine timber, and that when that was once removed the most sensible thing the owner could do was to let the state repossess it. Now, however, a thousand acres of land, well stocked with cedar, is a bonanza, and the possessor thereof may be looked upon as a "bloated monopolist landholder."—*Lumber Trade Journal*.

HEMLOCK BARK.

The great slaughter of hemlock trees throughout the country, says the St. John, N. B., *Globe*, in order to get the bark, has led to an application to the Dominion Government to place a duty on the export, in the hope that this duty will have some effect in stopping the destruction. This application will not be successful, and, if soccessful, it will hardly have the desired effect. The Provincial Government has just adopted some new regulations, in regard to the hemlock licenses, which will have some influence in preventing the destruction now so prevalent, while, at the same time, adding to the Provincial revenue. No doubt the Surveyor-General will give official notice of these in the next *Gazette*. We understand that in substance they are as follows:—

Applications to be made in the usual form for licenses.

All licenses for hemlock will expire on the 31st day of March in each year.

Each application for license must not be less than two or more than six square miles, and the upset mileage at the rate of 8 dols. per square mile must accompany the application.

The stumpage charged will be at the rate of 1 dol. per thousand superficial feet of logs cut, and the bark is not to be removed from the landings until the stumpage has been paid.

In setting the stumpage the mileage of 8 dols. per square mile will be credited for all licenses actually operated on.

The licensee is prohibited from unnecessarily destroying other growing trees on his license, and in case of violation of this section the license to be forfeited and the bark subject to seizure.

THE ELM.

The elm is by far the best and cleanest tree for the city.

The best size are those trees of about three inches in diameter four or five feet from the ground. It does not pay to set out those that are smaller than a man's wrist, because up to the size of three inches in diameter the trees can be transplanted with perfect safety, and the additional dollar cost is cheap for the four or five years' additional growth.

In digging up, the roots should be cut at least a foot and a half from the foot of the tree, making the ball three feet in diameter. For trees six inches in diameter a much larger ball should be left—a very good rule being to make the diameter of the ball in feet correspond to the diameter of the tree in inches, taken four or five feet from the ground, thus: Three inches, three feet; six inches, six feet.

It is well, but unnecessary, to keep a large mass of earth around the roots (as some seem to think very important) provided the roots are kept moist by wet straw or moss, etc. If the ground in which the tree grew should have been poor soil, it is better to remove it carefully and sift the good earth about the rootlets. Roots once dried and parched are like faded and dried bouquets—they may be soaked in water, but will never live again.

The stem should not be chopped, but in good bark, and should have a healthful appearance, straight and tall, not having the branches shoot out too low.

Some fools cut off the entire top and set out a row of bean poles. This should not be done. It is merely a trick of the nurserymen, who say: "You must cut off the top as much as you do the root." Few, its a poor rule that won't work both ways. Therefore, cut off the root as much as you do the top, and what have you? The tree men advocate cutting off the top merely to save trouble in hauling the trees. They care nothing for the looks of your trees as soon as you have paid for them. The root of the tree is its mouth and stomach; the leaves its lungs. Cut out the lungs and stomach of a boy you wish to live, will he thrive? If, however, the top be very large, it may be trimmed in a little, that is cut of the tips of the largest branches.

A single-stemmed top is better than a double-stemmed top, and less apt to split apart in after years, when the branches are heavy. Here lies

the success provided the tree has good and moist roots. Dig a hole large enough to receive the ball easily and deep enough to have a half-foot of good earth under it. Have plenty of good earth, best of all a mixture of swamp muck and garden loam. Don't be mean and niggardly to a tree that will live 50 or 100 years. Now, fill the hole half full of good earth and put the tree in place, so that its general appearance is good from the most important standpoint.

"The same side south" is all humbug. Keep the tree plumb!

When all is well arranged, begin to fill in the good earth, using only the best and finest in contact with rootlets; gently sift and shake it between the roots; be careful you do not leave an air-space just under the tree, across which no rootlet can throw itself and in which mould is sure to form. This is often a cause of failure, to avoid which it is well to make the earth in the middle of the hole a little higher than the sides before putting in the trees.

After a few inches of earth have been placed over the roots the earth should be pressed down with the feet, gently at first, so as to break them, firmly afterward.

Keep the tree plumb all the time.

The nurseryman's work is now done, yours just begun. Do not let the young trees be shaken by the boys, nor bitten by the horses. Do not forget to give each tree a pail of water during the hot days of the first summer, during which time you must expect the tree to have a little "set back," but all will be well the second summer.—*Brooklyn Eagle.*

STEAM HAULING.

Throughout the yellow pine section in the South, manufacturers generally are adopting the steam tramway system, as a better and a more economical way of reaching their mills or streams that are remote from the forests. Under the old manner of logging with trucks, with its many obstacles and delays, the cost would frequently run as high as $1 per M., but by the use of steam this sum is cut down to 15 cents per M., on distances covering five to eight miles.

Through this latter system over one fourth more timber can be brought to the mills, and the poorer grades handled, which heretofore have been left standing, as the cost of moving was too great. Another benefit derived through this same source is the ready connection of forests distant from streams, and the improved value of lands, thus connected, making them worth nearly as much as those more favorably situated.

The expense of building these roads has been calculated to be from $2,500 upward, of course depending on the material used. The advantages in moving timber by the process, and the difference in cost of transportation, is so discernible that the speedy erection of numerous roads is certain, and the profitable returns as assured as in the Northwest.

The introduction of steam tram roads, the improvements in milling machinery, and the erection of dry kilns in the South show that the people of that locality are determined to keep abreast of the times, and are willing to adopt measures that will promote the industry, and cheapen the cost.—*N. Y. Lumber Trade Review.*

Northwest Timber Limits.

There are upwards of eight hundred applications for timber limits in the Northwest now before the Department of the Interior, a great many of which are from persons who desire them purely for speculative purposes. The demand for lumber is growing faster than the supply is coming into market, and the establishment of additional mills will benefit the country. It is hard for the Department to distinguish between the honest and the speculative applicant, as all have to make the same declaration as to their intentions; but the popular policy of protection should lead to a strict enforcement of the conditions on which limits are granted, that those who do erect mills may be enabled to secure enlarged limits, if they require them, without having to pay middle men who prey upon the necessities of their neighbors. Selling limits by auction, as is proposed to be done with coal lands, would lighten the labors of the department, secure to it the amount paid by the *bona fide* mill owners to the interloping speculators, and at the same time enable the former to secure his limits at their intrinsic value.—*Saskatchewan Herald.*

Compressed Sawdust.

The *Canadian Manufacturer* in an article on compressed bran, sawdust, &c., says:—"If the problem of compressing bran were satisfactorily solved, a large export trade with England would spring up immediately.

It is now claimed that the problem is at last positively and satisfactorily solved, not only for bran, but also for sawdust, coal dust, and other kinds of waste products too numerous to mention. The Chicago *Industrial World* publishes a cut and description of "The Smith Consolidator," with which it is claimed that sawdust, coal screenings, tan bark, etc., can be compressed into convenient form on the large scale and at small expense. For instance, one of these machines of medium size, will turn out sawdust in blocks, solid and easily handled, at the rate of a ton and a half per hour. We would like to hear more of this machine, which really promises far greater results than people might at first imagine. In this wooden country, which we call Canada, its capacity for usefulness ought to be almost unlimited.

The English Timber Trade.

The *Timber Trades Journal* says:—Great depression still prevails in the English timber trade in the North Midland, Lincolnshire, and Yorkshire districts. Nearly all trades are in a sluggish condition, the railway carriage and wagon building trades being also very quiet. There is a slight improvement in the coal trade compared with the corresponding periods of the two previous years. The large falls of timber that have taken place this and three or four seasons back, with increased import from the Continent, America, and other places, coupled with bad trade, is the principal cause of the extremely low prices. There are a few kinds of the best qualities inquired for, but no better prices are to be obtained; the over crowded state of the market for oak is beyond recollection in several instances in this district. Previous years' falls are still lying in the woods, with a larger fall than usual this year, and also an increase in imports of foreign logs and manufactured spokes, &c.

Care of Belts.

A well-known belting manufacturer says: First, See that your belt is put on with the grain or hair side next the pulley, as it adheres closer to the pulley; then the flesh side, which is out, is stronger and not so liable to crack. Second—See that the belt is put on so that the joints run with, and not against, the pulley; you will, by this means, avoid tearing and splitting up. Third—Every person using belts should keep on hand the "Eureka" belt oil, for oiling purposes, applying the same just before stopping in the evening. It should be applied lightly. No. 1 beef tallow is also good, and where a belt has lain idle for a long time, and becomes hard, pure Neat's foot oil can be used, but under no circumstances should any other animal oil be used. Fourth—Give special attention, and impress your employes with the fact, that resin, coal-tar, pitch, and anything of a like nature is worse than useless, and will ruin your belts.—*Wordworker.*

Falling Lumber Dock.

MUSKEGON, Mich., June 30.—A dock with 800,000 feet of lumber fell into the lake on Thursday afternoon, precipitating twenty men at work on it into the water. Three or four of them are missing, but the men are Hollanders and their names are unknown. A boy named Frank Barnhardt was crushed under forty thousand feet of timber. Two immense piles of lumber adjoining which threaten to fall, prevent search for the bodies.

A VOICE FROM THE UNITED STATES.—I have suffered for the last twenty years with Dyspepsia and General Debility, and tried many remedies, but with little success till I used Burdock Blood Bitters when relief was quick and permanent. A. LOUGH, Alpena, Michigan, U.S.

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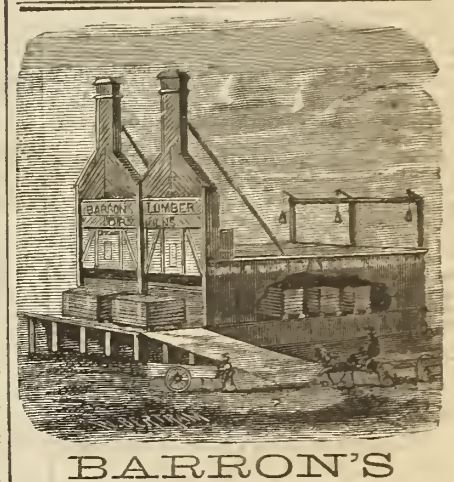

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. JULY 16, 1883.

A NEWSPAPER has been started at Deseronto, with the appropriate title, "Buzz Saw."

LARGE quantities of lumber are arriving at Quebec from the West over the North Shore Railway.

RECENTLY 2,800 logs were sold by the Titta-bawassee boom company, as unclaimed logs, and to pay the boom chargos against them.

THE farmers living along the River Moira, where lands have been flooded owing to the damming back of the water by the saw logs, have entered suits against the lumbermen.

A LARGE number of dock sticks, some of them 100 feet long, are being hauled from the mountains on either side of Lake George, N. Y., and shipped by way of Ticonderoga to New York city.

WE would call the attention of our readers to the important auction sale of valuable timber limits to be held at Ottawa on August 28th, the particulars of which may be found in our advertising columns.

MICHIGAN parties have recently bought 56,000 acres, and Iowa parties 16,000 acres of timber land situated in Escanaba, Conecuh, Butler and Crenshaw counties, Ala. It is proposed to ship lumber north.

AN old record recently unearthed contains the information that in 1823 lumber sold in Maine as follows: Clear pine, $18; merchantable, $12; refuse clear, $9; refuse, $6; mill refuse, $2.50; shingles, $3.

FRED. L. HEWINS, of East Winthrop, Me., and Louiscount Lyon, of Manchester, have purchased a tract of 200 acres, lying five miles from Augusta, on which grows what is known as "Widow Sanford's pines," the price paid being $6,000. The pine is all medium sized, second growth, and is in demand for box-making, for which purpose it will be shipped to Augusta after being sawed where it grows. A large steam mill will therefore be erected.

A. BANNING, at Ludington, Mich., lately made a contract with Aldrich & Brayman to unload 1,500 cords of hemlock bark from the cars to the railroad dock, at $1.25 per car. The bark goes to Milwaukee.

THE Rat Portage correspondent of the Winnipeg *Commercial* says:—On account of the low water not much more than 15,000,000 feet of lumber will be sawed at this point and Keewatin during the present season.

A LOG train on the St. John & Maine railroad makes five trips of 30,000 feet each per day, for James Murchie & Sons, from Magaguadavic lake to Vanceboro, Me., from whence the logs are floated to the Milltown boom.

THE planting of 100,000 eucalyptus trees on the Roman Campagna has counteracted the effect of the malaria to such an extent that the Tre Fontaine, the abbey of the Trappist monks, is rendered habitable through the entire year.

THE Winnipeg *Commercial* of July 3rd says: Owing to the dullness in building operations the demand for lumber is not great. There are several large contracts being let in the city which will rid the yards of some of their stock.

A RAILWAY being projected into the interior, British Honduras will be able to export larger quantities than ever of the mahogany, cedar, ebony, indiarubber, and other products with which she abounds, and of which this country can easily absorb large quantities.

A DESPATCH from Ottawa dated July 5, says: In the Department of the Interior, yesterday, tenders were opened for the limits in the Bow river country recently advertised. It is said that the bonuses offered are very satisfactory. The result will likely be made public in a few days.

THE Franco-American Trading Company, recently contracted for 500,000 feet of yellow pine in New York to be used on the Isthmus of Panama, in the building of 150 houses for the Do Lesseps Canal Company, the houses to be prepared and shipped in the knock-down from New York.

THE Belleville *Intelligencer* of July 9th says: Messrs. Gilmour & Co's. North River saw log drive, under the superintendence of Mr. Asahel Airhart, of Marmora, is now in Crow Bay. This drive takes the tail of the Beaver Creek drive to Trenton, and has been a highly successful one from the start.

A. C. DANNER & Co., of Mobile, Ala., will have a cypress plank on exhibition at the Louisville Exposition that will be 17 feet long, three inches thick, and four feet eight and a half inches wide. It will be free from knots and shake. The log from which the plank was cut was obtained in Baldwin county, across the bay from Mobile.

THE Orillia *Packet* says that Mr. John Knight, Manager of the Medonte Lumbering Company, was in Orillia on Monday. He says the rails on Medonte tramway will be laid as far as the mills within a month. Owing to the depth of snow last winter, only about three million feet of logs were got out which, will be cut within three weeks.

THE *Timber Trades Journal* says:—There can be no doubt but that the rage for American walnut, which gave to that trade such a spurt, has greatly subsided, and probably diverted the demand once again in the direction of mahogany and hardwoods. Fashion is everything, and the furniture and housebuilding trades form no exception to the general fickleness of taste; but we expect it will be a considerable time before there is such a run on American walnut as there has been. In suites of furniture there was a harshness about it which the other dark kinds of hardwood did not display. The straightness of the grain also, unlike the European descriptions, afforded very little to attract the eye after the novelty had worn off.

A SOUVENIR of this exceptionally stormy season was received by the Kirby-Carpenter Company from Edgar, Neb., recently, in the shape of an order for 600 window-blind slats to replace those broken out at that place by a late hail-storm. The storm was a terrific one and laid most crops dead over a space, a mile in width and two miles in length. Window blinds were no protection to glass, as the slats were broken, and all the glazing shivered, on the south and west sides of houses in the path of the storm.

THE *Lumberman's Gazette* says:—The F. & P. M. railroad is reaching out with branches after the pine which is accessible only by rail, and by this means has become an important feeder to the Saginaw river mills. About one and one-half miles has been completed from the main line just west of Farwell, upon which the first train of logs came out last week. This branch will be extended at least eight or ten miles this fall, and when completed will bring about 100.000,000 feet of logs within reach of this road, the log traffic of which has assumed enormous proportions.

TRADE WITH AUSTRALIA.

To the Editor of the Canada Lumberman.

SIR,—I happened to see your publication of the 2nd instant to-day for the first time, which I found full of interest.

I notice that you insert extracts from Australian timber circulars. I enclose you one of my firm's, Lord & Hughes, and if you think it worth while to make extracts from ours I will write by next mail requesting them to supply you with a copy every month.

We have been in the lumber business in Melbourne for about 25 years, and we handle nearly all the American and Canadian lumber that comes to those markets.

I am journeying through America and Canada picking up scraps of the lumber trade. I arrived last month at San Francisco, and have done America and part of Canada, and will leave here on Tuesday next for St. John, N. S., thence to Portland, Boston and New York, afterwards to England and Europe (Norway and Sweden).

I shall therefore assume that our monthly circulars will be acceptable, and will instruct my firm accordingly.

Yours truly,

SAMUEL HUGHES,

Of the firm of Lord & Hughes, Melbourne.

Quebec, July 7.

[We should be glad, not only to receive the circulars, but to have Mr. Hughes favor us with any remarks that he may think of value, as to his trip to Canada, and hints as to increasing the trade with Australia.—E. C. L.]

THE PRICE OF WHITE PINE.

The owners of white pine stumpage should try the ground a little more carefully before they venture forward loaded heavily with that kind of property. It is not so very clear, after all, that white pine lumber will advance in price in the ratio of its diminishment of supply. There is no good reason to infer that it is so essential in the building and mechanical economies that it cannot be supplied by something else. The history of the industrial world goes to show that commodities and useful material are valued according to their quality and intrinsic merit. Mahogany and black walnut are worth more than white pine for this reason, and not because they are so very scarce or hard to obtain. It is as handy and cheap to lay down mahogany in New York as Missouri walnut at the same place. The last pine tree sawed into boards, might be on the market, and it would not sell as high as some of the finer woods, unless somebody wanted it for a relic. Modern invention and progress do not enhance, but cheapen the necessaries of life. It is claimed by good authority that the staple, wool, has not been so cheap in forty years as now. Cotton yarns are cheaper now than since the spring of 1879, and it is thought that cotton generally will rule at a lower average during the ensuing year than at any time since the war. Iron and copper are ruling at the figures which were obtained in 1878. There has been no advance in the average price of food since one's boyhood, taking one year with another, unless it is in beef and butter, and events will regulate those when the vast Rocky mountain regions of this country and Mexico swarm with cattle and sheep. It may be said that over-production has kept down the prices of all these things mentioned, and that the capacity to produce them is unlimited, while the capacity to produce lumber from white pine is diminishing. But the tendency of modern invention and energy is to provide substitute commodities whenever there is money to be made by it. That which enters into common use, like white pine, must not cost too much. When the time comes that its scarcity necessarily forces up its price, the buyers rebel and reject it for something else. When white pine costs as much as walnut, mahogany, cherry and other finer woods, it will be scorned. When any of the woods cost more than the common people can afford to pay for ordinary uses, they will be rejected for iron, terra cotta, glass, or other substances, which will be cheapened to the grade of common use by invention. While pine will undoubtedly be a product of firm commercial value in the future, under the influence of a diminishing supply it will never reach a price much above what it averages to-day.—*Northwestern Lumberman.*

WHAT CAUSES THE TIMBER LINE?

A writer in the New York *Independent*, says: The cause of what is known as the timber line on high mountains continues to be discussed in scientific periodicals, and the attempt continued to connect the line in some degree with mean annual temperatures. The writer of this paragraph has had the matter in mind when on these high elevations, and the explanation seemed very simple. On all these high peaks there is a continuous, though in some cases slow, descent of the soil from the summit to the base of hill. He has never seen a case where there was soil enough to grow a tree, that trees were not growing. As the wash from the rain or melting snow will be nearly uniform in a given range, there will be of necessity some uniformity in the timber line. On Mount Washington and other high places, little plots of dark vegetable earth can often be found far above the present timber line, the remains of trees which existed before the earth was washed away. What is called the timber line seldom shows graduated sizes as a mere matter of temperature would call for. Generally the line is formed of very small trees, and immediately scrubby plants, from the absence of deep soil, begin.

NORTHWEST TIMBER BERTHS.

For several months past the Department of the Interior has advertised for the lease of five hundred square miles of timber berths of fifty square miles each, in the Northwest Territories, situated on Moose Mountain, in the district of Assiniboia, and on the Bow River, and on its tributaries the Kananaskis and Spray Rivers, in the District of Alberta. It was provided in the conditions that only one berth should be granted to the same individual or firm, but the same applicant was allowed to make a separate tender for each of the berths. According to the regulations governing the granting of yearly licenses to cut timber on Dominion lands under section 52 of the Dominion Lands Act of 1879, provision is made for the licensee paying a ground rent of $5 per square mile; for requiring that within a month after the date of the Order in Council granting a timber berth, the person in whose favor it is passed must pay the rent for the year in advance, the rent to bear interest at the rate of six per cent. per annum from that date until the same is paid; that when applications for licenses conflict, berths shall be laid off and described as the Minister of the Interior may direct, and tenders shall be invited for the same. Persons tendering are required to state the sum or bonus per square mile which they are willing to pay in addition to the ground rent and a royalty of five per cent. on the amount of the sales of all the products of the berth, and the limit is awarded to the person offering the highest bonus. Licensees are required to have in operation within a year from a date to be fixed in the license, and to keep in operation for at least six months of each year of his holding, a saw mill, capable of cutting daily at least two thousand feet board measure

of lumber. It is further provided that when a licensee has complied with the conditions above enumerated, and where no portion of the berth is required for settlement, or other public purposes, of which the Minister of the Interior is to be the judge, the license may be renewed for another year, subjected to such revision of the annual rental and royalty to be paid there for as may be fixed by the Governor-in-Council.

Tenders for the berths above referred were received by the Department on the second of July, and were opened on the third. The highest bonuses offered per square mile were the following, which were accepted :—

Berth A, J. G. Thorp	$104 20
" B, J. G. Ross & Co	81 00
" C, O. H. Ingram	124 80
" D, A. McLaren	44 20
" E, Vincent W. Bayless	104 20
" F, A. McFee	104 60
" G, John B. Kehl	104 40
" H, Franklin Holman	64 20
" I, W. A. Rust	124 60
" J, Isaac Kerr	124 40

Considering the want of facilities for moving the timber, the distance from the market, and the absence of other convenience experienced by purchasers of limits in the Province of Ontario, the above offers are considered good.—*Ottawa Citizen.*

DANGEROUS DOORS.

Adequate authority ought to insist, says the *British Medical Journal*, that all doors in the passages of large buildings, which are likely to become crowded, should swing freely both inwards and outwards. It is dangerously difficult, and it may become impossible at a critical moment, to open a door which can only be opened against the impact of a pressing crowd. The fastenings of such doors should be regarded as perilously faulty unless they are so arranged that they can be quickly and readily loosed without risk of fixity. Probably the most dangerous fastening for the doors of public places is one like that which contributed to cause the disaster in Sunderland—namely, a vertical trailing bolt at the bottom of a door, which becomes fast by dropping into an opening in the flooring over which the door moves. If these and some other important points in the number, capacity, and direction of the channels of egress from public buildings, and especially in the construction and working of the doors of such passages, were efficiently remedied we should probably hear of fewer instances of loss of life from the inevitable rushes and panics of persons confined in crowded spaces.

MONTREAL NOTES.

The *Gazette* of July 6th says :—The local demand has been light for all kinds of lumber, excepting cherry and ash, which are wanted for both the home and American trade. There is a fair business reported in laths at the advance previously noted. Deals continue to be shipped to British ports on nearly every steamer, and lumber is going forward to South America, two vessels having been chartered to the River Platte during the week at $15@$15.50.

Moving Lumber.

THE *Lumberman's Gazette* says :—The largest fleet of lumber-laden vessels which ever left the Saginaw river in a single day passed out of the river on Saturday afternoon in less than ten hours, between 12 o'clock noon and 10 o'clock at night. People who imagine that there is nothing doing in lumber in this market may be undeceived by scanning the list of vessels. A reasonable estimate places the amount of lumber on board this fleet at about 23,000,000 feet and this amount of lumber moving out of the river, just at this time furnishes food for reflection by those interested in lumber, indicating as it does the beginning of the lively times during the next 30 days.

Hoops for the Children.

Most of the plain wooden hoops which serve as toys for the children are made at Granville Corners, Mass., and the more expensive ones at Philadelphia, Pa. In making plain hoops, ash or beech is cut into straight, narrow strips and steamed, when the wood is readily bent till both ends meet, which are fastened together with tacks. An ash or beech stick goes with a hoop, and the ordinary price is 10 cents. Granville Corners turns out from 75,000 to 100,000 annually. The Philadelphia hoops are more stylish. After steaming and nailing the wood, the workmen bevel the edges of the rims, put on a few bright colors, and fasten diminutive bells on the under side at regular intervals.

DESTRUCTIVENESS OF FLOODS.

The recent floods in the Missouri and Mississippi have resulted in destructions to crops, land and property in general, which can only be estimated in millions of dollars. It appears to be almost certain that the increasing number of destructive floods of late years must be largely attributed to the rapid denudation of timber lands which has been going on. Of course floods will occur periodically whether forests are removed or not, but their frequency and destructiveness seems to increase as the extent of well wooded land decreases. The leaves and roots of trees, and the sod protected by them, all act as a sort of sponge, absorbing any heavy rainfall and giving it forth again gradually, thus measurably removing the danger of excessive floods. But when this gigantic natural sponge is destroyed by the removal of the timber, the rain runs off as it falls, violently swelling the small streams, which in turn rush on to the rivers, and a flood is the result. Tree planting certainly looks like a slow way of stopping floods, but that, judicially prosecuted, it would ultimately be successful, there can be but little doubt.—*Lumber World.*

The Spruce Dying.

A despatch from Bangor says there has been a great destruction of spruce trees in Northern Aroostook. The owners of pine lands have already lost thousands of dollars, and the matter is causing great anxiety. An entomologist is going to Aroostook to look into the cause of the decay and death of these trees. He will probably be accompanied by Franklin B. Hough, of the United States Commission of Forestry, who has recently been in the state making some investigations. Jacob Hardison, of Caribou, says that in five townships the spruce over eleven inches in diameter are dead or dying, and that the young trees are unaffected. His view of of the cause is that about eight years ago there were heavy rains, which loosened the earth. The rains were followed by a protracted gale and a hard winter. The root fibres were broken which caused decay ; then the worms followed. He says that on the northwest slope, where the wind had the greatest range, the trees suffered the most. The trees present a seared appearance first at the top, and year by year death passes toward the roots.

Texas Timber.

A Texas paper says : "The timber lands of northern Texas will be, in the course of a few years the most valuable of any lands in the state. Lumber can be bought, delivered at our doors for $1.50 per 100 feet, while in the western counties the same will bring from $4 to $6, and the demand on our almost inexhaustible forests is becoming greater every day. Thus far little timber has been culled beside the pine and walnut, while the thousands of acres of white oak, red oak, ash, hickory, bois d'arc, sweet gum, etc., remain in their virginity, not a stump showing that the destroying hand of man has ever been lifted against them. It is believed that these forests will necessarily be drawn upon to supply a demand for building purposes, railroad ties, etc., as fast as the tributary west is building up."

Timber Berths in the Northwest.

OTTAWA, July 10.—Some time ago the Department of the Interior advertised for the lease of 500 square miles of timber berths of 50 square miles each in the North-West Territories, situated on Moose Mountain, in the district of Assiniboia, and on the Bow River and its tributaries, the Kananaskis and Spring Rivers, in the district of Alberta. Tenders for these berths have now been opened, and the leases have been awarded to the following parties for the bonuses offered per square mile :—Berth A, J. G. Thorp, $104 20 ; B, J. G. Ross & Co., $81 ; C, O. H. Ingram, $124 80 ; D, A. McLaren, $44 20 ; E, Vincent W. Bayless, $104 20 ; F, A. McFee, $104 60 ; G, John B. Kehl, $104 40 ; H, Franklin Holman, $64 20 ; I, W. A. Rust, $124 60 ; J, Isaac Kerr, $124 40.

IN cutting wood, when the cutters revolve and the wood is only fed to them fast enough to allow them to operate, a much higher speed is possible than if the tool be stationary and the wood is driven at a rapid rate, as in turning. There are two causes for this. In the first place, each cutting surface in the former case is alternately working and resting, while in the latter instance there is a steady friction on the single surface, which, if the work be pushed too rapidly, will soon develop so much heat as to draw the temper of the tool. In the second place, the rapidly revolving cutters act as a sort of fan, producing a strong current of air which assists in preventing too great heating.

SPEAKING of the new docks at Tilbury, near London, the *Timber Trades Journal* says :—The timber mostly used in the construction of these docks is pitch pine and Danzig, and already about 10,000 loads of such have been consumed, besides considerable quantities of spruce. There are now two cargoes in the Thames close to the works of something like 1,500 loads of Danzig and pitch pine. We may observe, in reference to the latter, that the dimensions are especially large for sawn timber, the average length being 55 ft., and the square abont 14 in. The whole of this cargo, we are told, was cut at Pensacola by Mr. D. F. Sullivan (the largest shipper at that well-known southern port) to the engineer's specification specially for these works. One-third of the cargo was over 70 ft. long, a thing as yet never attempted at the port named.

THE London *Timber Trades Journal* says : Thursday June 28th at the "Baltic" showed little or no better result than that of the day before ; bidders had it apparently all their own way, and prices as usual took an exceedingly low tone throughout. It was only the few reserved lots that met with a buyer here and there which showed anything like a remunerative price, and it is questionable if the upset price had not been drawn on a very moderate scale, if even these would have been noticed at all. There seems no life in the bidding just now, and if the competition takes an occasional active turn, one or other of the bidders retires from the strife just at the point when prices are beginning to take a move upwards. Only bargains tempted the general body of buyers, and it was to the unreserved lots the dealers alone cared to turn their attention.

ROCK ELM WANTED.

A Few Car Loads of good ROCK ELM, cut into 1½, 2, 2½ and 3 inches thick, 12ft. length prefered.

DUFRESNE & JODOIN,
Lumber Dealers,
6L12 496, St. Joseph Street, Montreal.

SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞ Canada Pacific Railway now running through part of the property.

For full particulars address :—

WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

WATER POWER
TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND
1d86 LAKEFIELD, ONT. w15L9

A RARE CHANCE!
Valuable Steam Saw-Mill
FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings through piling Grounds connected with main line of Canada Pacific Railway. The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waba Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, Seigneurs Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

ALEX. FLECK,
6L11 Ottawa.

AUCTION SALE
—OF—
VALUABLE
Timber Limits

I will offer for sale by Public Auction, on account of whom it may concern, at the Grand Union Hotel, in the CITY OF OTTAWA, on TUESDAY, the 28th day of AUGUST next, at the hour of 2.30 o'clock in the afternoon, Timber Limits as follows :—

PARCEL No. 1.

License—

No. 389	Kippewa,	Season 1882-83,		50 sq.	miles.
390	do	do	do	40	do
391	do	do	do	20	do
398	do	do	do	6	do
399	do	do	do	50	do
397	Temiscamingue,		do	50	do
385	do	do	do	6	do
406,	River Ottawa,		do	25	do
386	do	do	do	67½	do
400,	Coulonge & B River		do	7	do

PARCEL No. 2.

401,	North of River Coulonge			30	do
402	do	do	do	30	do
403	do	do	do	30	do
404	do	do	do	30	do
405	do	do	do	30	do

PARCEL No. 3.

387,	River Ottawa,		do	17	do
388	do	do	do	43	do
392,	River Coulonge,		do	50	do
392	do	do	do	50	do

PARCEL No. 4.

					Miles.
Upper Ottawa,	License 1873-4,		No 431,	containing	58¾
do	do	do	532	do	49½
do	do	do	533	do	52
do	do	do	534	do	47¾
do	do	do	535	do	32½
do	do	do	537	do	46¼
do	do	do	537	do	50¾
do	do	do	538	do	47½

PARCEL No. 5.

do	do	do	507	do	50
do	do	do	508	do	47½
do	do	do	509	do	40
do	do	do	510	do	28
do	do	do	511	do	26

Also half interest in Licenses Nos. 343 and 344, season 1882-83, 87 square miles.

Timber cut on Kippewa Limits was sold in 1880, 30c ; 1881, 32c , and 1882, 32c. There is also a farm in connection with the limits which will be sold with a quantity of Clear Mess Pork, Flour, Oats, Beans, Hay, Horses and other rigging requisite for shantying.

TERMS—Cash, or one-third cash, one-third in 6 months and one-third in 12 months, with interest at 6 per cent., approved notes. For further particulars apply to the Crown Timber Agent, Ottawa, or to

R. C. W. MacCUAIG,
3L14 Auctioneer,

THE FORESTS OF MAINE.

The words "state-of-Mainer" in the woods of Michigan for many years was the synonym for what was understood as being well versed in lumber logic and in all the ramifications of the business from the cutting of the tree to its delivery in the boom in logs. But of late years this term has not been so common, and a "Canuck" has been considered fully equal to to the man from Maine. This naturally led to the inference in some circles that the lumber business in the Pine Tree state was about extinct, and the situation of that state has been very often referred to as foreshadowing what Michigan was inevitably coming to by the ultimate extinction of her pine timber. Later reports, however, indicate that the lumber industry is far from being "petered out." One of our Boston exchanges says that now that the returns are all in, it is ascertained that the output of logs in Maine is about 600,000,000 feet, and it is estimated "that there were employed in the neighborhood of 10,000 men and 3,000 horses and oxen. On the Penobscot choppers and sled tenders were paid from $25 to $30 per month, and it is guessed that the men on this river were paid $250,000 during the season. The season for sledding was one of the hardest ever known." The employment of ten thousand men in the lumber woods of Maine indicates anything else than that the lumber industry is a thing of the past in that state. Michigan men may take heart from the above facts.—*Lumberman's Gazette.*

RAILROAD TIES.

During the last five years the price of railway cross-ties has increased 25 per cent., and the quality offered for sale in open market seems to have decreased in about the same ratio. The specifications generally prepared by railway companies do not maintain the former high standard, either in manufacture or quality of timber used. The number of kinds of soft wood that may be used for this purpose has increased nearly two-fold, and a larger number of inferior hard woods, hitherto rejected, are now included in the specifications for cross-ties. Take, for instance, a hemlock tie, of which considerable quantities are brought here by lake vessels. They will last, ordinarily, about one-half as long as a white oak tie, yet they now bring as much in open market as a first-class oak tie sold for ten years ago. The best timber suitable for cross-ties is not entirely exhausted, but where good timber grows there is also good soil, which generally sustains a larger and more compact population than in a comparative treeless region, and there must of necessity be a greater drain upon the timber supply for houses, barns, fences, etc. In sections where the farming population is greater, so are the cities and towns proportionately larger, and they must also be supplied with the commercial woods for manufacturing purposes, as well as a supply of cordwood for fuel, from which the whole population draws largely, unless there is, as in Illinois, a coal mine within a reasonable, or rather economical, transporting distance. Many farmers have reserved a portion of the natural timber upon their farms for prudential reasons. If they have an unfavorable year and poor crops, they eke out their income to meet current expenses, taxes, etc., by selling a part of their reserved timber. They will make a few hundred cross-ties for the nearest railway, also several cords of wood for sale in town, and at the same time add a little more arable land to the farm.

The consolidation of railway lines has had a tendency to equalize the distribution of cross-ties, and in some instances it has saved the "mother" line from an unavoidable stringency in the annual supply absolutely required to run the road-bed. Oftentimes the branch lines absorbed by the larger company have in the region where located greater resources of tie timber to draw from than the entire main line. It used to be considered that 15 cross-ties to a 30 foot rail—or 2,640 per mile—were sufficient for the heaviest traffic. But with heavier cars and engines, and heavier loads, the number per rail has been increased to 17, or 3,000 per mile of track, and while we have been putting more wood on the road-bed, the rails have been increased in weight, with a tendency to a still heavier rail. The heaviest rail used in this country does not exceed 72 pounds per yard, the average being 60 pounds per yard, or 94 tons per mile, while the best English roads use a double-headed rail weighing 80 pounds per yard. Allowing an average face to face cross-tie of nine inches, and 3,000 ties per mile, we have a wood-bearing surface of 2,250 lineal feet per mile of track. The English roads, with a heavier rail, have a much less number of cross-ties. A rail weighing 80 pounds per yard equals 125.7 tons per mile, and with cross-ties of nine inches face (average), and 10 to each rail length, the English track has a wood-bearing surface of 1,432 lineal feet, about 33 per cent. less than our own roads. This is what we shall eventually come to in America—a heavier rail and less wood on our road beds. We think that it is not safe to use a softwood tie, such as white cedar or hockberry, save upon tangents, and then oak ties should be used at the rail joints, with only the best oak ties upon curves.

The English roads have no oak ties in their road-bed; their principal ties are made from "larch," which comes from the shores of the Baltic sea. The European larch is about the same wood as our tamarac, and said to be a little less resinous. We reject this wood in America for such purposes. In its native regions the farmers use it extonsively as fence posts. Whether it has ever been tried for cross-ties we cannot say, but think it would answer the purpose very well if it would not check too badly, a defect quite natural to the wood.

The time is coming when railway companies will have to use a greater number of soft wood ties, or ties of a less compressive strength than oak, and many woods not at present available because of their rapid decay when placed upon the ground, will come into general use by means of the increased durability given to them from some of the preservative processes now of a tentative character. This will necessitate a return to the use of iron chairs to prevent the rails from cutting into the soft wood ties. These chairs the English railways have always used. The cheaper methods now in vogue for manufacturing iron will undoubtedly give us a cheaper chair than we used 15 years ago, and it remains for the practical track man to give us one of better form and strength, and at the same time simple and effective in its use. The chair should be the same pattern both for end and intermediate bearings, and must be fastened to the tie with something that will retain its hold more firmly than the common spike.

The wooden cross-tie will never be discarded from the railway road bed. There is nothing that will take its place so well under all conditions; it is elastic, easy of renewal, little effected by frost, and at its maximum cost is much cheaper than any substance yet devised. We doubt if a metal cross-tie can be safely and cheaply used north of the fortieth parallel; we should think that the extremes of temperature common to higher latitudes would cause them to be an unsuitable support, particularly when exposed to the action of frost or the extreme heat of the summer sun.—*Railway Age.*

SAVE THE TREES.

We find that the views expressed by the *Chronicle*, with reference to the wholesale destruction of young maple trees on St. Jean Baptiste day, have met with the cordial indorsement of almost everybody in the community. Indeed, we cannot see how other views should prevail for a moment. It is quite clear that if we plant trees we do it with a view to preserve the forests, and it is equally clear that if the saplings are to be torn up by the roots and wasted six weeks after the planting the task is rendered useless, and all the work and bother go for nothing. Either Arbor Day must be made to mean something or else we had better abolish it altogether. There were more young trees destroyed in the city of Quebec on Saturday and Sunday last than we planted in the entire Province on the 9th and 18th of May last. This must not coutinue.

On the part of some sensible members of the St. Jean Baptiste Society, a well conceived resolution was passed early during the past week with regard to maple trees. We believe Judge Chauveau and Mr. Le Sage of the Agricultural Department, moved energetically in the matter and beseeched their fellow-compatriots to spare the young trees, and adopt some other mode of decorating the streets. They were over-ruled, but their words had some effect, and the better class of our people refrained from purchasing the car-loads of handsome young maples which stood before their doors. Now if moral suasion will not deter people from destroying our trees, the law must be invoked to protect them. We call on Mr. Lynch to use his influence, and to bring in a bill at the next session of the legislature, making it a misdemeanor for any one to cut down trees under a certain age, and providing a penalty also for the persons who use the trees as they were used, or rather ill-used, on Sunday last. We ask the *Cures* of parishes to employ their great influence with their congregations, and to ask the people who listen to their teaching to forbear from denuding the forest lands of their native Province. The labor of three years should not be thrown away on a single day's pleasure. We hope our words to-day will bear good fruit, and sink into the hearts of all true men who wish to see a prosperous future for our common country. To that end all must lend a helping hand. The conservation of our forests should be the national policy of Quebec.—*Quebec Chronicle.*

A FOREST AT THE BOTTOM OF LAKE TAHOE.

For some years past there has been a bank in Lake Tahoe, which in clear weather has generally been taken for moss formation. It lies at the right of the steamer's course between Tahoe city and Tallac house, about two miles beyond Idlewild. It looked as if a lot of trees had sunk to the bottom of the lake and that moss and slime had collected there until the whole presented a wavy semi-transparent appearance about 50 feet below the suface. During the past few weeks the moss and debris has disappeared, and now when the water is clear a forest of pine trees can be plainly seen with every limb and twig perfect. On Wednesday last some fishermen went out there in a boat, and, lowering some grappling irons, secured some splendid pieces of the petrification. One is a pine branch about three feet long, which, held a few feet from the eyes, has the exact appearance of a pine branch just taken from a living tree, and apparently fresh and green, the brittleness and weight distinguishing it from the freshly-cut branch. The forest occupies about two acres, and seems like a forest immersed, except that its stony branches are forever still and tall weeds and vines which cluster about the trunks of the giant trees are as motionless as the rocks. No wind ever stirs this strange verdure, and the birds which once sang in the branches centuries ago have given way to fish, which swarm through the forest in thousands.—*Carson Appeal.*

LAKE NIPISSING.

Beaucage Bay, June 26.—A large quantity of square timber belonging to Barnet & Mackie, David Mooro and J. R. Booth, is being loaded on cars at North Bay, bound for Quebec.

Fraser & Sereney are driving their timber down French River into the Georgian Bay. A forwarding company of Kingston has the contract of delivering it in Quebec. M. McDougall is also driving this river with several thousand logs.

The total cut of timber about Lake Nipissing this winter is not less than 1,000,000 cubic feet and it is all large and fine timber, both in size and quality. It is said to be much ahead of the average of what is taken out along the Ottawa.

A report is current that the extension of the Northern Railway from Gravenhurst is to be shortly commenced. This road is much needed in this section of the country to connect with Toronto and the west. It is supposed they will tap South East Bay, one of the finest harbors and booming grounds on Lake Nipissing. Here a number of lumber firms are likely to erect mills, and from this point, ship by rail. South East Bay is looked upon as the coming town of Lake Nipissing. North Bay will also be an important point, as the C. P. R. are taking considerable pains to make it a prominent shipping port for the lumber trade. Two or three miles north of this place there is said to be a very fine township of land, and already there are some thirty farms taken up.—*Ottawa Free Press.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to June 29:—

	1881.	1882.	1883.
Waney White Pine..	347,509	357,399	739,502
White Pine.....	1,050,206	1,047,377	438,948
Red Pine.....	214,752	174,564	43,393
Oak.....	785,193	455,594	431,138
Elm.....	393,129	165,815	83,918
Ash.....	152,815	91,962	43,986
Basswood	3,069	130	1,176
Butternut.....	173	1,245	373
Tamarac.....	3,573	326	991
Birch & Maple.....	107,888	185,750	134,450
Masts.....	—pcs	12 pcs	—pcs
Spars.....	— pcs	— pcs	— pcs
Std. Staves.....	45.5.0.20	52.5.1.15	108.9.2.15
W. I. Staves.....	92.2.1.0	275.5.1.21	34.8.0.1
Brl. Staves.....	.....	1.7.3.29	21.4.0.4

JAMES PATTON,
Supervisor of Cullers.

Quebec, June 29.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

One of Many.—Mr. R. W. Carmichael, Chemist and Druggist, of Belleville, writes as follows:—"Your Burdock Blood Bitters have a steady sale, are patronized by the best families here and surrounding country, and all attest to its virtues with unqualified satisfaction."

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on May 31st, 1882 and 1883, and also the Consumption for the month of May, 1882 and 1883:—

	Stock, May 31st. 1883.	Stock, May 31st. 1882.	Consumption for the month of May 1883.	Consumption for the month of May 1882.
Quebec Square Pine.....	112,000 ft.	58,000 ft.	27,000 ft.	62,000 ft.
" Waney Board.....	108,000 "	150,000 "		
St. John Pine.....	8,000 "	3,000 "	— "	— "
Other Ports Pine.....	38,000 "	25,000 "	2,000 "	3,000 "
Red Pine.....	12,000 "	14,000 "	8,000 "	8,000 "
Pitch Pine, hewn.....	484,000 "	707,000 "	182,000 "	240,000 "
" Sawn	513,000 "	347,000 "	200,000 "	321,000 "
Planks.....	45,000 "	67,000 "	26,000 "	30,000 "
Dantzig, &c., Fir	75,000 "	102,000 "	5,000 "	51,000 "
Sweden and Norway Fir.....	6,000 "	4,000 "	6,000 "	4,000
Oak, Canadian.....	148,000 "	214,000 "	23,000 "	29,000 "
" Planks.....	190,000 "	68,000 "	32,000 "	80,000 "
" Baltic.....	20,000 "	53,000 "	— "	5,000 "
Elm.....	27,000 "	36,000 "	— "	4,000 "
Ash.....	— "	9,000 "	— "	4,000 "
Birch.....	46,000 "	40,000 "	59,000 "	21,000 "
East India Teak.....	33,000 "	63,000 "	34,000 "	20,000 "
Greenheart.....	130,000 "	61,000 "	8,000 "	24,000 "
N. B. & N. S. Spruce Deals.....	9,079 stds.	7,220 stds.	3,821 stds.	4,975 stds
" Pine	780 "	380 "		
Quebec Pine & Spruce Deals.....	4,305 "	3,510 "	1,409 "	1,509 "
Baltic Deals,.....	3,254 "	2,220 "	406 "	204 "
" Boards.....	231 "	100 "	81 "	— "
" Boards Flooring.....	5,824 "	3,080 "	2,273 "	1,960 "

Chips.

THE Indians are threatening mischief in Spokane county, W. T., and the loggers have received arms and ammunition from the governor.

MESSRS. Wm. Bently and W. F. Fawcett, having purchased 3,000 acres of wood land in the township of Albermarle, Bruce county, intend going extensively into the lumbering busineas. Mr. Bently will take charge of the operations, with head quarters at Wiarton.

S. W. FOSTER, of the Muskegon Booming Company, is having a scow built, 20x45 feet, which is to be used in getting logs into the water that have been thrown on the shore. It will be furnished with a 50-horse power engine, and will use wire cables with which to pull the logs from shore into the water.

FELIX L. OSWALD says :—"The true basis of national wealth is not gold, but wood. Forest destruction is the sin that has cost us our earthly paradise. War, pestilence, storms, fanaticism and intemperance, together with all other mistakes and misfortunes. have not caused half as much permanent damage as that fatal crime against the fertility of our Mother Earth."

OUR cast iron pulleys are much lighter than formerly, and latterly, wrought iron pulleys have been introduced, having in addition to the advantages of being already balanced and being stronger than cast pulleys, that of being very much lighter. Wooden pulleys of very neat construction have been placed on the market, and paper has also been pressed into service as pulleys.

THE Rat Portage correspondent of the Winpeg *Commercial* says :—A tow of two thousand logs was brought in on the 22nd June by the steamer Couchiching for the Rainy Lake Lumber Company's mill, which started cutting on the 23rd and is running day and night. The Winnipeg Lumber Company's new steamer the Princess, was launched on the 14th, and the machinery is now being put in.

A SOUTHERN mill man, in a communication to a New Orleans paper, advises his southern neighbors to procure good machinery and improve their methods of manufacture so as to cheapen and perfect manufacture. He suggests they will find it true economy to erect steam dry-kilns, and provide proper planing machinery, thereby enhansing the value of their product and increasing their profits. It does not pay to ship water and shavings, rotten and otherwise valueless lumber.

AN estimate places the amount of standing pine beyond the headwaters of the Pike, a tributary of the Menominee, in Wisconsin, at 1,500,000,000 feet. This pine is at present inaccessible to a driving stream, and must be reached by rail. The Wisconsin and Michigan railroad will probably penetrate this district, and bring out the logs for manufacture. It is quite as likely, however, that railroad mills will be built, and much of the product shipped west and northwest.

THE Emerson *International* says :—The piles which have been lately arriving from Dakota for the pile work of the new bridge are of very inferior quality, and only a few of them can be used in the work. We understand the contractors are to send men up the Pembina River, to cut piles for themselves, as they will be able to secure any number there of the very best quality. This will delay the work somewhat. One of the pile drivers is at work on the west side of the river near the West Lynne coulee.

THE Boston correspondent of the *Northwestern Lumberman* says :—These Boston yards are at present very well stocked, although there have been times within a year when there was a larger amount on hand than now. Coarse lumber has sold right along better than fine grades, and the hardwood trade has been better than last year. The yellow pine trade dropped off in April and has not yet come up to expectation, although there is now a better feeling and prices are a little stronger. Spruce and hemlock are in very good demand, and prices reasonably strong, although the combination prices on spruce are being cut by some producers. There is some demand for shipping pine.

MESSRS. NELSON, MATTER & Co., of Grand Rapids, Mich., lately received a consignment of toa and tomano woods from the Sandwich Islands, and have made it up into desks. The former wood resembles walnut and the latter mahogany, both, however, being finer grained and susceptible of a better finish than the more common words. This is the first time that either toa or tomano have been sent east of San Francisco, and the experiment has proved so successful in every respect that it is likely to be repeated.

THE Muskoka *Herald* says :—The proprietors of the shingle mill at Matthiasville have adopted a novel and cheap way of transporting their shingles down the river as far as the Black bridge, thereby avoiding drawing them up and down the hills on the road. A number of saw logs are fastened together with lines and the shingles piled thereon, the loaded raft is then cut loose and allowed to float down stream to the bridge, the shingles are put ashore, the raft broken up and the logs of which it was composed sent on their way, rejoicing, no doubt, at having contributed to cheap transportation of shingles to the front.

THE *Timber Trades Journal* says :—The supply of Canadian deals to Clyde has been unusually early this year. These imports have come chiefly per steamers, and before any of the "fleet" of timber traders to Greenock have arrived. But it is not likely that the imports of deals will continue on so large a scale, as the results of public sales are not encouraging, the attendance at these having been smaller generally than was to be looked for at this season, and even when pretty numerous showing little disposition to purchase. Some lots are being sold privately, no doubt, but the public sales give evidence of an extremely quiet trade.

THE London *Timber Trades Journal* says :—Everything points to a good fall trade ; if sellers do not push stuff where it is not actually needed, the improvement may come earlier than a great many expect. The inclination seems to be to hold best goods and press the common qualities, sellers forgetting, probably, that by so doing they give a downward character to the market generally, which cannot fail to act unfavorably on almost every description of timber. With regard to the dock stock of deals, timber, &c., there is nothing in their present proportions that need cause apprehension of any over supply, and on most of the chief items they are considerably less than they were this time last year.

THE London *Timber Trade Journal* says :—It may be a matter for congratulation, or the reverse, that the shipments from the timber ports have hitherto been confined to such limited proportions ; but it is undoubtedly favorable for an advance in prices should trade become more active. Whether that would be an unmitigated blessing to the general body of consumers or not it is unquestionably what sellers would like to see speedily established, though probably a large trade at present prices would be more agreeable to the big stock holders on the other side than business on a smaller scale at 5s. advance. Just now, however, it is the smaller scale without the improved price, though the moderate shipments may naturally be expected to lead up to an increase in value.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine

I am yours truly,

W H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

A MINISTER'S EVIDENCE.—The all prevalent malady of civilized life is Dyspepsia. Rev. W. E. Gifford, of Bothwell, was cured of Dyspepsia and liver complaint that rendered his life almost a burden. The cure was completeed by three bottles of Burdock Blood Bitters.

WHAT EVERY PERSON SHOULD KNOW.—The grand outlets of disease from the system are the Skin, the Bowels, and the Kidneys. Burdock Blood Bitters is the most safe, pleasant, and effectual purifier and health-restoring tonic in the world. Trial bottles 10 cents.

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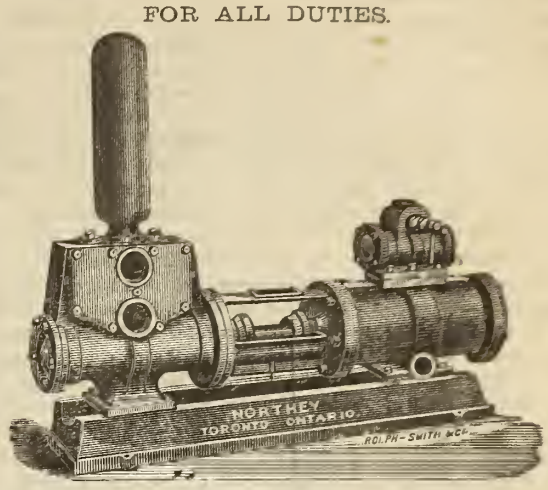

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The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O. ; W. EDGAR, Kilroy, P.O. ; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

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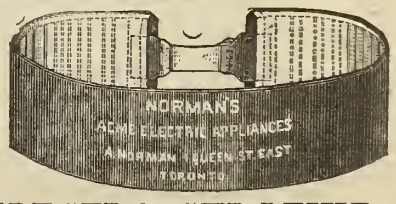

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A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

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Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1t7

Market Reports.

TORONTO.

From Our Own Correspondent.

JULY 9.—Flat is the most expressive word to apply to the present condition of the lumber trade here. Stocks are accumulating on the hands of the wholesale dealers and vessels tied up at the docks, and plenty of lumber on the wharves to give them cargoes. In the face of this state of things dealers do not seem discouraged at all, there is a general hopeful feeling that shipments will move off briskly as the season advances, and as a reason for the faith that is within them, they point to the undoubted fact that there is less dry lumber of last season's cut on hand at the present time, than at any corresponding period for several years past, and, although trade on the American side is not as brisk as could be desired, still there are hopeful signs of an improving market. However, there is no use in denying the fact, that manufacturers cannot dispose of new cut stocks at $1 per M less than the same grade of lumber sold at this time last season. This, in the face of an increased cost of production, of at least $1 per M, makes a difference to the producer of $2 per M below last season's prices, which is a serious matter, especially to such as are working on borrowed capital. If the advice given repeatedly by Mr. Wm. Little, of Montreal, to lessen production, could only be acted upon it would be good policy. But the difficulty is, there are only a few manufacturers who could afford to let the capital invested be idle, so the work of destruction to our noble forests go on from year to year, and sold at a mere tithe of their ultimate value of a few years hence.

At the yards there is a slight tendency to break on prices, more especially in coarse boards and plank. Bill stuff holds its own fairly, and lath and shingles are firm at previous quotations, the market not being at all overstocked with either of the latter, and there is little doubt but that mill men who have a suitable class of timber for bill stuff will do a remunerative trade the season through, and any loss there may be will fall mainly on those who confine themselves to the wants of the American market. Cherry and butternut are in good demand and for which good prices can be obtained, if cut into squares, and 3 in. and 4 in. plank. The trade with western Ontario continues fair and considerable shipments by car are being made on through rates direct from the mills.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

BOSTON.

Cotton, Wool and Iron of July 7, says:—There is no particular change in the situation. Trade is running along in a quiet and moderate way, and is expected to do so for the remainder of the summer. Prices also keep pretty even. Pine is in fair request at previous quotations. Spruce and hemlock hold pretty steady. Southern pine keeps along about as of late. In hardwoods the demand is principally for choice grades.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

CHICAGO.

The *Northwestern Lumberman* of July 7, says: Not as many cargoes arrived at this port during the week ending at date as during the preceding week, the comparison standing 157 to 243. This considerable falling off is attributed to adverse winds by the consignees more than anything else. They generally take but little stock in the reports from the other side of the lake that shipments were to be withheld. A leading commission dealer said that he had received no instructions from his consignors that anything of the kind was afoot, and he thought it would be foolish for the manufacturers to pursue that policy, for the reason that should the market offerings be lean, Huron and Saginaw lumber owners would seize on the opportunity to rush their stock in, where the east shore lumber might have been. By reference to our cargo market reports last year at a corresponding time, we see that there were then adverse winds and a falling off in receipts; but after July 4 a big fleet came in, and the succeeding week the receipts aggregated 65,000,000 feet of lumber and 18,000,000 shingles. It is probable, therefore, that by the time this issue is in the hands of its readers the receipts will again be heavy. The national holiday, and the extremely hot weather, together with the adverse winds, have conspired to keep back arrivals to some extent. without taking into account the reported application of brakes at Manistee and Muskegon.

Though the market has not been over crowded with cargoes on any day of the week—not even on Monday—the enquiry has not been very active. Offerings have been got rid of to be sure, but there has been an inclination to stand around and wait on the part of buyers, and make the riffle at the last moment only. It is presumed that when the market has this sluggish feature about it, prices are not very firm at the quotations. The heaviest drag is noticed on Norway dimension, which the yard men persistently and conscientiously pound in every case. This cannot be wondered at, since the question of weight in freight rates has become such an important one in delivered lists. Norway piece stuff is undoubtedly good to use, but it is bad medicine to ship to Kansas and Nebraska, when A is trying to beat B on prices of delivered stock. The yard men this season delight to hammer prices anyway, and Norway comes in for the beating every time, and it has to go for about $9 a thousand.

The asking price for a fair run of white pine, short dimension, is $9.50, and it is doubtful if its selling value is appreciably lower than that. If deals are made at a lower figure, it is "just because it is you, you know," or some peculiarity in the schedule is taken iuto account. Where there is a large proportion of long lengths in the cargo, the top range of our quotations only are reached, which is not as high as in former seasons.

On the whole, the market is barely holding its own at the recent decline. Buyers are still troubled with indigestion, and do not take hold eagerly. Still the offerings move off in time, and an immense amount of lumber is changing hands. It is reported that one commission house last week sold 23,000,000 feet of lumber, but the story sounds as if it carried in it an ingredient of the Fourth of July.

Quotation are as follows:

Short dimension, green	$ 9 00@10 00
Long dimension, green	10 50@11 50
Boards and strips—No. 2	11 00@13 00
Boards and strips—Medium	13 50@16 50
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 25@ 2 40
Extra A	2 45@ 2 80
Lath	1 75@ 1 80

The official figures giving the arrivals of lumber and shingles for the past week are omitted in this issue, being unobtainable in full, owing to the non-session of the board of trade during a part of the week. No comparisou could be made between the figures at hand, and the oues representing the receipts for the week ending July 5, last year, consequently they would be of little interest. Our next report will include the receipts for the two weeks.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1½ in. siding, select	42 00@45 00
Pine, 1½-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

OSWEGO, N. Y.

From Our Own Correspondent.

We correct former quotations; since our last the market has been dull, and the decline in prices has not had the expected result of increasing the demand. Stocks are large and still increasing; dealers from the interior are buying very sparingly, doubtless expecting a still further decline as the new cut will soon be dry enough to come forward.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1½ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of June 22, says: There is very little to say in regard to the freight market. Rates from the Baltic to London remain very weak; in fact, it is said by those closely connected with the trade for many years, that such a dearth of inquiry for both deals and firewood tonnage for London has never previously been known. As a counterbalance to the miserable state of the market here, a brisker demand for the out-ports and France, with a slightly higher rate, has to be reported. From Canada the market still remains firm, with a slight inclination upward. No arrivals from Quebec are reported, yet probably some steamers from thence will put in an appearance before we again meet our readers.

A tolerably large contingent of wood-laden vessels have entered the port since we last wrote, the total amounting up to 57, of which 29 were steamers, the others being the usual class of sailing ship. Not many of them are, however, with deals from Sweden, only four are from the latter country. The bulk of the arrivals seem to be made up of firewood, with a couple of Pensacola shipments to add to the already sufficient stocks of this description. Amongst the list is the steamer Viking, from Montreal, with some deals, but the quantity is uot much to add to the limited stocks of pine. The mahogany cargoes are plentifully distributed throughout the list. As yet the steamers preponderate over the sailing ships, a state of things that could hardly have been imagined, much less realized, ten years ago.

Last year at this time there were only 24 ships arrived during a similar period, but these were subsequently improved upon, and the arrivals were quite on a par with those we have now to record. Nevertheless the present tot up is a very formidable fleet coming on a flat market, and prices can hardly recover in view of this large increase. The winds have been up to the last day or two very favorable for ships from the northward, and though not so material a point with steamers, nevertheless greatly facilitates their voyage.

LIVERPOOL.

The *Timber Trades Journal* of June 23, says: The imports have come forward a little more freely, and include some cargoes of pitch pine, which will be placed in the open market on account of the shippers. The general condition of trade, so far from showing any signs of improvement, tends rather the other way, and the complaints of the continuance of a bad state of business in the manufacturing districts are as rife as ever. The suspension of a small house in the wholesale trade here, with liabilities of about £6,000, has had a disqnieting effect upon the market in Liverpool, and it is also rumoured that a dealer in Manchester has been compelled to make an arrangement with his creditors, who are principally Liverpool timber merchants. Though the amounts involved are not large, yet they influence business very materially, and tend to check what little life there is in the market.

There is but little doubt that this was felt at the auction sale of Messrs. Alfred Dobell & Co., who offered a very fine cargo of Mobile hewn and sawn pitch pine timber and deals, just landing. The local trade was well represented, but there were hardly any country buyers in attendance, and the sale, therefore, was slow and dragging, the prices realized being very low, considering the quality and large size of the timber. As neither the cargo of Darien sawn pitch pine nor the parcel of Savannah hewn pitch pine had arrived, they were not offered.

GLASGOW.

The *Timber Trades Journal* of June 23, says: The past week's imports here comprise some further supplies of Canadian deals, the arrivals of which since the season began, now sum up to 89,700 pieces, as against 69,000 pieces at corresponding date last year. Of lower port deals (chiefly from St. John, N. B.) there have been imported this year 237,000 pieces, as against 171,500 pieces last year at corresponding date. The only arrivals to note at Greenock for the week is a cargo of pitch pine timber. Imports of this wood to date compared with last year's are, 1882:—30,500 logs, hewn and sawn; 1883, 22,000 logs. The arrivals of teak to Clyde since the beginning of the year have been 9,869 logs, as against 13,717 logs last year at corresponding date.

The stock on hand of the various wood goods in Clyde ports will be taken at the end of this month.

Of Quebec log timber the quantity held is comparatively light. At the end of March last the aggregate was 31,000 loads, as against 42,000 loads at the same time 1882. The consumption of Quebec log timber during the quarter ending 30th June, 1882, was about 18,000 loads, and if the curreut quarter comes up to this, it is evident a comparatively small total will be shown on hand at the end of this month.

Besides the leading imports that have been noticed, parcels of wood goods arriving weekly, per steam liners from New York, amount to a large total. Of staves, for instance, there have been 410,000 pieces imported this year, also a cargo of 116,000 pieces per sailing vessel. Last year's total at date was 454,000 pieces.

There have been no public sales to note since last writing, but several are announced, and will be duly reported.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on June 16th says:—Since my last letter the great bulk of the first spring fleet has sailed from the lower ports of the Bothnian Gulf, and it is now seen that the

aggregate export has been larger than anticipated. A gratifying feature of the present spring shipment is, however, the proportion to which the outports on the Continent and in Great Britain have contributed, as contrasted with the quantities shipped to what are called the head entrepots. If we analyze the clearances, for example, in the Sundswall district, from whence the heaviest export has taken place, from May 22nd to June 12th, we find that out of a total of 255 wood cargoes exported within that period, only 19 cargoes have been despatched to the four principal ports of the United Kingdom, viz., 10 cargoes to London, eight cargoes to Hartlepool, and one to Hull. Grimsby is conspicuous by its absence. From the Gefle district, again, the clearances during the time above named were 144 wood cargoes altogether, of which eight were despatched to London, five to Hull, two to Grimsby, and eight to Hartlepool. It must also be borne in mind that a considerable portion of the above eighteen cargoes for London from the Sundswall and Gefle districts consisted of firewood. The above fact would seem to sufficiently dispose of the apprehensions that importers in London and other important centres would be likely to be swamped by consignment shipments.

Notwithstanding that production continues on a smaller scale than last year, and that the statistical position of the trade, as expressed by logs in the water and stock on hand, is decidedly better than it was then, I am sorry to have to report increased weakness for the lower qualities of redwood. It is generally the case that the smaller firms have to bear the brunt of the censure that falls to the lot of those who spoil prices, or rather who are popularly supposed to spoil prices, by their erratic and plunging mode of doing business consequent on loading themselves with too much stock; but now we find that wealthy firms, in an anomalous state of the trade like the present, suddenly turn round from their former high standpoint and reduce their prices considerably without the excuse that their poorer brethren generally have. Such, unless I am wrongly informed, is what has lately occurred south of Sundswall, and if persisted in will be likely to demoralize the trade. An immediate further decrease in the production of both red and whitewood is now imperatively needed, and should be acted on as far as it prudently can.

A reduction, has, it is said, been made at Hudikswall, 80 men having been dismissed from one of the yards at that place a few days ago. As soon as importers in the large English centres are convinced that they have nothing to fear from consignment shipments, and that last winter's "log-get," with the present production, are both moderate, they will soon to cease their persistent waiting policy, and I therefore consider the Society of Saw-mill Owners, &c., at Stockholm would do the trade a service were they to publish at once the actual figures showing the quantity of logs cut during the late winter in Norrland, as compared with 1881-82 cuttings, and which they have presumably now received from the different districts.

As we have been favored with heavy rainfalls during the last fortnight, the streams in Norrland are now in better condition for floating, and complaints of want of water are not so much heard. In the Ljusne and Dal River districts floating has been tolerably successful up to date, while further north the late fall of rain will have helped the small streams considerably.

THE AUSTRALIAN TRADE.

We take the following extracts from the May circular of Messrs. Lord and Hughes, of Melbourne :—

The amount of business done in timber and building materials since the date of our last issue on the 10th ult., has been considerably below the usual monthly average, arising from the fact that the trade are in fair stock and importers not pressing sales. The demand from the yards for consumption still continues active, but during the winter months there is likely to be a falling off. Stocks of most lines held by importers are large, and we do not look for higher prices than those now ruling before the spring of the year.

LUMBER.—Imports: *Nil.* Sales by auction have been parcels ex "H. G. Johnson" and "Leading Wind." Michigan clear pine realized £17 12s. 6d. per 1,000 feet super; white pine shelving, 12 inches wide, £10 2s. 6d. to £10 3s. 6d.; over 12 inches, £10 15s.; T. and G. Ceiling. £8 15s. Particulars fully reported below.

AUCTION SALES.—17th April—Ex "H. G. Johnson," 8,576 feet 2½ in. Michigan clear pine, £17 12s. 6d. per 1,000 feet super.; 20,000 feet 3 in. do. at £17 12s. 6d. do.; 25,000 feet 12 in. white pine shelving, at £10 2s. 6d. do.; 59,194 feet do., at £10 3s. 6d. do.; 35,182 feet, wide do., at £10 15s. do.; 26,352 feet 10 in. T. and G. Ceiling, at £8 15s. do.; 1st May—Ex "Leading Wind," 2,500 feet 2½ clear pine, at £13 per 1,000 feet super.

Messrs. Gemmell, Tuckett & Co.'s May report just received from Melbourne, says :—Since last issue we have to report a steady demand for all descriptions of building materials, and prices realized during the month fairly sustain our late quotations. The building trade continues active, and the deliveries from the store yards are well up to the average of several months past. American lumber.—A shipment per H. G. Johnson realized at auction for Michigan clear pine, 2½. 3, and 4 in., £17 12s. 6d. to £17 15s.; w. p. shelving, 15 in., £10 2s. 6d. to £10 3s. 6d.; do. wide, £10 15s.; w. p. t. and g. ceiling, 10 in., £8 15s. Ex Leading Wind, 2½ in. clear (inferior), £13 per m. ft. super. Unless large shipments come forward prices will advance, as the trade stocks are moderate.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec :

JUNE 28.—Collins Bay Co., oak, &c., sundry coves.

G. Germain, deals, Portneuf.

McArthur Bros., white pine, &c., New London cove.

British Canadian Lumber and Timber Co., white pine, &c., St. Michael's cove.

R. H. Klock, white pine, etc., Cap Rouge.

Flatt & Bradley, oak, elm, Sillery cove (Sharples).

E. P. Moor, white pine, &c., Cap Rouge.

E. L. Sewell, deals, Jacques-Cartier Mills.

Collins Bay Co., staves, Union cove.

Smith, Wade & Co., birch, St. Raymond Station.

John McRae & Co., staves, New London cove.

John McRae & Co., staves, Indian cove west.

JULY 5.—Sundry persons, oak, &c., sundry coves.

John McRae & Co., staves, Montreal.

E. L. Sewell, deals, Les Ecuriules.

Cook & Gibbons, ash, &c., St. Michael's cove.

YOUNG'S POINT, ONT.

From Our Own Correspondent.

SAW LOG DRIVES.—Mr. R. C. Strickland had a drive of saw logs arrive here on Saturday July 7th of 13,000, B. Loraque, forman, *en route* to the mills at Lakefield. Messrs. Ullyott & Saddler have two large drives at present in Clear Lake. F. Bell, foreman, has 40,000 and John Barr has 35,000, all *en route* to their saw mills at Harwood. This completes their drives for the season. A. Wynn, forman for Mr. Geo. Chalmers, arrived here on Monday, July 9th, at the snubbing ground with his large drive of saw logs, having made a splendid run from Boschink Narrows. From all appearances it will be a few days before any drives can pass through here, as several booms have broken loose between this place and Lakefield.

HIGH WATER.—The water still keeps very high, and the high winds we are frequently having of late retards the progress of saw log driving very much. This time last year we had scarcely water enough to float a tie from here to Peterborough; the steamers had to quit running, and the saw mills on the Otonabee had to shut down. This year it is quite the reverse.

THE *Timber Trades Journal* of June 30, says: The imports are pretty numerous this week; seventy-three vessels, sail and steam, have brought timber of one sort and another to the Thames since the date of our last report. Of these rather more than half are sailing ships. Still the steam-shipping trade is fairly represented, and apparently shows no sign of being out of favor with wood freights. Some people there are who attribute the unsettled state of the wood market to the fact of vessels of this class being now so largely employed in it. But this an opinion we do not exactly coincide with. Although steamers have undoubtedly brought about a great change in the shipment of deals, &c., we think they are so well recognized now that the market fluctuations which they caused at their first introduction have subsided, and the general body of importers, we expect, would rather lament their withdrawal, should such an event occur.

IT is said that nearly 100,000 acres of Kansas lands have been planted with trees under the act of Congress authorizing additional preemption where trees are planted. The Cottonwood tree is mainly planted because it grows rapidly. Besides these trees thus planted in masses, there is more or less tree planting on all farms for shade, ornamentation or fruit. In time these trees must favorably effect the climate, and perhaps break the force of the fierce winds which now sweep with but little check across the state.

THE *Timber Trades Journal* of June 23rd says :—There was a good average business done at the London docks this week, though the deliveries were not excessive. About the same as at similar date last year, something less in deals and flooring, but more in square timber. Though trade can hardly be said to be very lively, there is no laxity to be worth taking notice of in the dock business. It is remarkable that the timber deliveries from the Surrey Commercial Docks are always smaller in the summer months than in the spring and fall.

THE weight and density of different kind of woods are extraordinary. In Brazil there is a variety of tree the specific gravity of whose wood is less than cork, 0.206, while that of the ironbark of Australia is 1.426. The formation of the cells of soft and hardwood differs insomuch that the fibres of the one are more densely or compactly laid than in the other. It is the straight-grained woods that have the greatest flexibility, though the beautiful effects of color, and woods best adapted to ornamental work are found among the tough, cross-grained and knotty varieties.

This issue of the CANADA LUMBERMAN is printed for the first time by means of power supplied by a water motor from the factory of Messrs. Tuerk Bros. & Johnston, of Chicago. The water is supplied by the Peterborough Water Works Company, which draw their supply from the Otonabee river. This motive power is most satisfactory in every respect, being thoroughly efficient, with steady regular motion, economizing fuel and labor, and adding greatly to our comfort by the lowered temperature. This motor seems especially well adapted for printing offices.

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CORRECT GRADING.

The advantages of uniform grades are many. In the first place, a man new in the yard business can buy of reputable houses with safety. A demand for a certain grade will bring it. There are a few handlers of lumber in this market who pass over to the consumer material that would not pass muster, if inspected by a man of experience, but those handlers have no connection with our best yards by any means. They thrive on the ignorance of their customers, and were it not for this ignorance their business would bo very moderate in proportion.

It is not every retail dealer who understands that it is best for him to sell uniform goods from one end of the year to the other. This is specially true if he has dealings with carpenters and contractors who known what lumber is. A dealer may go to a market in which he does not buy regularly, and buy a better grade of any particular description than he has been used to handling, and, strange as it may appear, his doing so may injure him as much as though he were to buy an off grade. The one lot will please his customers, but unless he can duplicate it, the next lot will be a disappointment. His customers will either want him to duplicate the better lot, or ask for a reduction on the other.

A strict uniformity of grades is as necessary for a retail dealer as for a large market. There should be a standard rigidly adhered to, and many a dealer has learned that it is dangerous to step away from the line in either direction.—*Northwestern Lumberman.*

ABOUT SAWS.

In a little work on "Hand Saws," by F. T. Hodgson, we find the following:—

"Heating spoils saws. Some sawyers will run a saw until it is tremendously hot, and, to make it worse, they throw cold water on the side, thus causing sudden contraction on that part of the saw, and after a few such times the saw has to go the factory to be hammered and put in order, and to come back to meet the same fate as before. If the saw is round, hangs true in mandrel, is in line with the carriage, filed square at top and bottom, the backs of the teeth lower than the points, with the required amount of spread set, and the teeth kept well chamfered with a gummer, so that when the saw runs only the point will come in contact with lumber, then a saw will run free and cool, and there will be no extra strain on the plate, no heating or danger."

Regarding the bursting of saws, the author of the work says: "Circular saws sometimes burst from what may appear as unknown causes. There can be no doubt, however, whon a saw does fly in pieces from some apparently unknown cause, but that a thorough investigation would trace the occurrence to one of the following causes:—

1—Square corners at bottom of tooth.

2—Out of round, with the backs higher than the points, so that instead of cutting, they scrape the dust off with the back.

3—Undue strain put upon the saw by the plate rubbing against the timber, causing it to heat, which takes the life out of a circular saw."

CYPRESS.

Although cypress has been in use many years at the South for building purposes, it is only within the last two or three years that its value has commenced to be appreciated at tho north; but the demaud for it is said to be steadily increasing, and the probability is that ere long it will form a very considerable portion of the supply of lumber sent to this market. There are two varieties of the tree, usually called the yellow and red. The latter, which is the harder of the two, grows upon the highlands, and as it takes a high polish, is extensively used at the South for furniture, shelving, counters and wainscoting. The yellow variety grows in swamps and bottom lands in the State of Alabama and all along the Gulf Coast, and throughout these sections is used as a substitute for white piue, although whon thoroughly dried it is rather hoavier and does not work quite so easily. It is claimed that it is stronger than white pine, that it can be nailed without splitting, that it does not warp, and does not readily absorb moisture. It is used exclusively for hogsheads, barrels, tanks, cisterns, etc. It is also used for picket fences, sashes, blinds, door sills, clapboads, shingles, tanks, and vats for breweries and mills, and is said to be growing in favor for dyeing and chemical vats, as the dye does not effect it as much as other woods.

The most important quality of the wood is represented to be its great durability, which has been amply tested with the most satisfactory results. In this respect it valuable for the foundations of buildings upon filled-in land, where the wood is apt to become wet and then dry, as it will not rot easily. Since it has been systematically placed upon this market, it has been growing steadily in favor witb builders, and as its merits become better appreciated, the consumption of it will no doubt increase. The lumber generally runs large and clear, and the price at which it can be laid down here makes it a cheap wood for almost any purpose.—*Lumber Trade Review.*

DULUTH AS A LUMBER CENTRE.

The Duluth *Times*, of a late date, refers to the rapid growth of the lumber manufacturing interest at that point, since Michigan men have taken hold, purchased land and built mills, and predicts that this branch of industry and trade is to be one of the chief elements of Duluth's progress upward toward the "zenith" of its hope long deferred. There is no question but that Duluth is as well situated to become a great lumber manufacturiug and market centre, as any point in the Northwest. All it needs is ample railroad facilities, directly west into north Dakota, and northwest into Manitoba. Rail communication southwestward is already secured, and will be added to in the near future by connecting branches and links. The Lake Superior region and northern Wisconsin might all be made tributary to a great distributing market at Duluth, which should become second only to Chicago. The hundreds of miles of shore encircling Lako Superior afford as ample a means of reaching out and gathering pine by the cargo, as does Lake Michigan for this market. Duluth stands to the treeless agricultural regions of Dakota, Nebraska, and tho prairie sections of the nearer states of Iowa and Minnesota, as Chicago did to Illinois, Missouri and Iowa, when the lumber trade grew up here. But Duluth lumbermen must realize the necessity of building up a trade in wholesale yard assortments before it can become a great market.—*Northwestern Lumberman.*

QUEBEC.

The *Chronicle* of June 29th, says:—The timber market continues in a very quiet state, and tho rafts now arriving are hardly even examined by shippers, which show that there is no inclination to purchase. Some very choice timber has reached the market, and especially we may mention a raft from Nipissing, about 60 feet average, as woll as one from Kippewa—last year's timber—about 51 feet average, and sold at 28 conts. We also hear of a dram of white pine, 42½ foet average, just arrived, at about 26 cents. A small quantity of red pine, about 39 feet average has been sold at 16 cents. Very little inquiry for hard woods, except for ash and walnut; both of these woods are wantod for shipment.

SHIP KNEES.

Most people are probably not aware that for the past eight or ten years a rathor extensive business has been carried on in the shipment of hacmatac kuees for ship buildiug from Ontario to the states of Maine and Massachusetts. Maine has been so long looked upon as a land of inexhaustible forests, that it is with surprise we learn that the fine ships of which its people are so proud could not be built but for the assistance of Canada. There are plenty of small knees in Maine, but large knees of eight inches and upwards are very scarce, and those that exist are in places not easily reached. Among the first to operate in the shipment of knees to Maine was Mr. J. S. Edgerley, of Fox Meade, Ont., although a Maino man. There are eight or nine persons now engaged in the business. Most of the knees go to Bath, and the cost of carrying them over the 1,100 miles of railway between the place where they are cut and Bath is $85 a car or about $2 each. The price at Bath varies from $7 to $8 and $9 each, so that ship knees are by no means cheap. During the present summer it is expected that large shipments of knees will be made to Maine from Ontario.—*Montreal Herald.*

A BIG UNDERTAKING.

When the North-West Lumbering Co. first signified their intention of erecting their saw mill, at Selkirk, Man., and of rafting their logs across Lake Winnipeg, many who possessed a knowledge of such work predicted the failure of the enterprise. There was no vessel on the lake they claimed powerful enough to tow a raft. It was also stated that the storms so frequent and sudden on the lake would prove disastrous to the raft, no matter how strongly it was constructed. All these predictions were totally uncalled for, as a few weeks ago a very large raft was successfully towed across the lake by the steamer Colville. This raft, which was 1,200 feet long, by 80 feet in width, was the first brought across the lake. A two-inch hawser was stretched through the centre of the raft, and was secured to each joint by side ropes. The actual running trip was fifty hours or two miles an hour. Mr. G. H. Bradbury, formerly of this city, one of the managing partners of the North West Lumbering Co. superintended the work of towing, and he has proven that such a voyage can be made with safty and security.—*Ottawa Free Press.*

LARGE LOSS IN DAMP FUEL.

Burning wet or damp wood or coal, instead of dry is much more wasteful and expensive than most people imagine and the subject is worthy of attention. An extensive series of experiments, recently made at Bochum, Germauy, shows that six tons of finely broken dry coal gives as much heat as about seven tons burned as wet as it would be if water were dashed upon it and drained off after a short time. And this is the condition of much coal kept in damp vaults, leaky sheds, or out of doors. The lesson is obvious: keep the coal in a dry place and condition, and 5 to 14 per cent less according to its fineness, will he needed to obtain the same heat. There is a good scientific explanation of this. Water, in changing to steam or cold vapor even—that is, in drying off—conceals or makes latent, about 1.000 degrees of heat.§ If heated to 212 degrees, the boiling point, the steam really contains about 1,200 degrees of heat, alihough only 212 degrees are sensible, or are shown by the thermometer.

The waste of heat is still greater in hurning green or wet wood. The sap or water uses up—that is, carries off in latent state—a very large portion of the heat produced by its carbon, or its dry material. As much man and team power is required to haul three or four cords of green wood as for six or eight cords of dry wood. The lesson is: cut the fuel and split it as finely as it is to be used, in the grove; haul it home when well dried, and it in a dry place for use. It will he worth far more for heating purposes than if hurned green or wet, or damp even. The only exception to this rule is only when, by reason of easier hauling on snow, and on account of the leisure of men and teams in winter, it may be expedient to haul home the green wood then; but in all cases let it he well dried before it is used.

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The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

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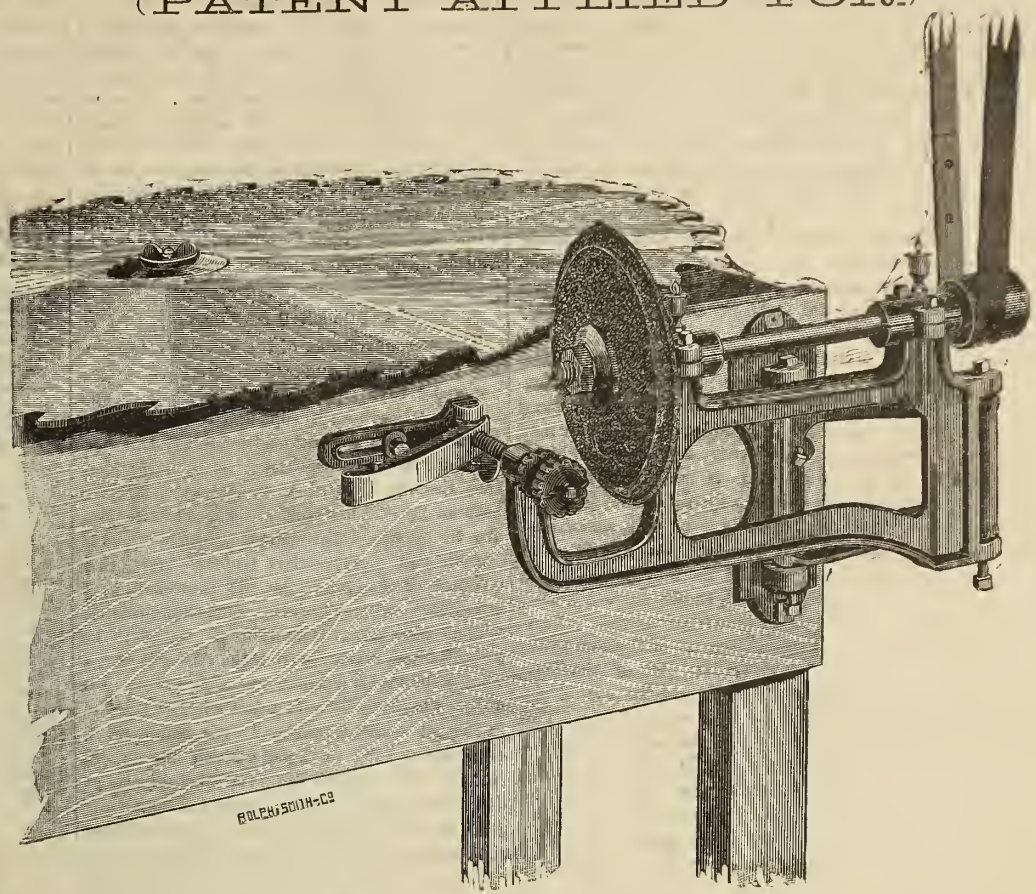
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



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Cheap!

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POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!

JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞ Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

CHARCOAL AND BI-PRODUCTS.

Readers of the *Lumberman* will remember that several times mention has been made in its columns of the Mathieu retort for making charcoal. Mr. J. A. Mathieu called at this office recently on his way to Detroit from the South. He has been putting in four retorts for the Shelby Iron Company, at Shelby, Ala., and will put in 76 more for the same concern. The 80 retorts will turn out 10,000 bushels of charcoal per day. The gentleman has now 56 retorts in Michigan, 24 in New York, and 82 elsewhere. As everybody knows, wood in the South is very cheap, and there are many who may be interested in knowing the financial result of making it into charcoal. Mr. Mathieu gives it as follows, per cord of yellow pine, the prices representing the values of the different products on the ground at Shelby.

68 bushels of charcoal,	7 cts.....	$4 76
12 gallons of turpentine,	30 cts...	3 60
2 gallons of wood alcohol,	90 cts	1 80
Tar		1 50
Total		$11 66

The entire cost of treating a cord of wood, including labor, interest on the investment, wear and tear, etc., does not exceed $2.50. To place the price of the products considerably lower, the profit would be regarded large considering the outlay. Mr. Mathieu, as will be seen elsewhere, has been giving his attention to a new style of refuse burner. Aside from being safe, it is profitable. A safe and profitable "hell" is certainly a new idea. A safe burner has been desired by many a mill owner after an unsafe one has been the cause of the burning of a stock of lumber. A large mill firm recently wrote to this office regarding refuse burners, saying that sparks from its old one set on fire 6,000,000 feet of lumber which was consumed. Smaller fires from the same cause have been frequent. The burner in question is said to be absolutely safe, and, besides, to pay a profit of about $5 for every cord of refuse wood thrown into it. The slabs, edgings, etc., are put in at the base of the burner, and the charcoal is taken from the top. The fire can be kept continually burning. The charcoal is suitable for locomotives, blast furnaces, etc., and the cost of the burner is about the same as that of an ordinary burner. From the acetic vapors are made turpentine, alcohol, and other marketable liquids. The *Lumberman* thoroughly believes in Mr. Mathieu's retorts for making charcoal, insomuch that it turns wood, that would otherwise be of no use, into dollars and cents, and being pretty well acquainted with the ability of tho gentleman as a chemist and inventor, it has no reason to doubt that his refuse burners will be as great a success as his retorts are.—*Northwestern Lumberman.*

MINNESOTA PINE.

The alleged pine land frauds in Minnesota have again been brought into prominence by the indictment in the United States Court of four men, charged with fraudulent practices in obtaining lands and timber belonging to the public domain. The individuals indicted are John McGuire, S. R. Wentworth and J. H. Caldwell, of Duluth, and C. B. Sleeper, of Crainard. The latter is county clerk of Crow Wing county, and it is charged that he was in collusion with the other parties mentioned, by which Sleeper gave them bogus certificates, which were issued to fictitious names, and on the strength of these, entrios in tho land office were duly filed, and the timber on the lands entered afterwards cut off and sold. Almost simultaneously with these arrests and indictments W. W. Spalding was removod from tho government land office at Duluth. Since his removal he has spoken out loud, and declares that while the arrests were just enough, they were not brought about by the vigilance and enterprise of the federal officials, but through the connivance of a ring of much larger and more powerful fellows who picked up only a quarter section at a time. The *Lumberman* has before described the alleged method pursued by the great pine land owners, who promoto public sales, like the late one at St. Cloud, at which it is said they freeze out outsiders and small would-be buyers by high bidding, and afterwards letting the bids lapse, until the outsiders are discouragod and give up in disgust; whereupon the alleged ring steps in and gobbles the land at a minimum price.

The capitalist always enjoys the advantage of being able to do that legally, by the overbearing power of money, that the man of but little or no means is forced to do, if he does it at all, by fraud or crooked means. For instance, numerous individuals in the Duluth district, and other parts of Minnesota, have wanted to get possession of the pine on government lands in that state. The land was subject to entry as homesteads, under the pre-emption law, but not otherwise, except when the government should order special auction sales in districts that had been set apart and surveyed for the purpose. It was the most natural thing in the world for operators in logs to use the pre-emption dodge in getting possession of timber, inasmuch as they wanted nothing at all of the land after it was stripped of pine. It is well known that the pre-emption scheme has been worked for years with great success, so far as securing the pine was concerned; but the chickens of illegal procedure are apt to come home to roost sooner or later, and the men recently arrested have an example of the truth couched in this homely saying.

The capitalists who, it is said form a Minneapolis ring, and have promoted the prosecution of the fraudulent pre-emptors, have evinced much righteous indignation against the men who were picking up quarter section lots, but it is presumed that their virtue was pricked as much by their own moneyed interests as by the loss that the government was sustaining. They wanted that pine, and they did not want it slashed into here and there by so-called pre-emptors. They wanted it all, in untouched, virgin blocks, and at government price. So it has been all along the schemo of the capitalists to dog the small oporators out of the pine woods by shouting fraud, and sotting on the federal officials whon that was possible. The bill that was pending in the last congress, introduced by the Hon. R. D. Washburn, and said to be backed by Senator Sawyer, of Wisconsin, and favored by the new Senator Sabin, of Minnesota, to repeal the pre-emption law, has its motive in the desire to wrest the pine lands from the pre-emptors, and give the capitalists at Minneapolis and Stillwater an opportunity to buy it up in blocks.

The difference between the scheme of the large operators and the small operators is this: that of the first is legitimate; that of the other is illegitimate. One is the method of the monopolist; the other that of the swindler and thief. Poplar prejudice puts both on a par, but there is a wide difference in favor of the monopolist. The Minnesota pino capitalist, of course, want all the pine land they can legally get their feet on. There is nothing essentially wrong about that, in a business sense. They want to secure the land as cheaply as possible. There is nothing surprising about that, since they are human. They want it before the small operators have "hogged" over it and spoiled the best tracts. They don't want to see men from down East at the sales, and do not mean to let anybody but Minnesota men buy up blocks of the lands they covet. They have for years had men in the woods, going over the government lands prospecting, and know where the best pine is to be found. They have the inside track and intend to keep it, and make the most that is to be made out of Minnesota pine. It is likely that there is a combination among the wealthy pine owners of Minnosota to secure tho results indicated in the foregoing; there may be, or there may not be. There can be no doubt, however, about their intention to own the most of the government pine in northern Minnesota.

But when it is alleged that there is anything particularly reprehensible about the designs of the alleged ring, it seems like straiuing the question. If thore is auything wrong in the Minneapolis scheme, it is in the alleged freezing out of would-be buyers by high biddiug, and then refusing to take the lands as bid in. If there is collusion betweon the bidders and the government officials in this scheme, it amounts to a swindle, and should be ferreted out and punished. But if the government agents, who conduct the sales, know nothing about the motives of the straw bidders, all that can be said is that the alleged ringsters perpetrate a clever trick on the outsiders. It may not be strictly honorable and business-like, but it could not be called illegal, or even preventible.

So far as the public are concerned, the general good would be better subserved by allowing the pine lands of Minnesota to pass into the hands of the great operators, who have capital enough to cut and manufacture the pine and distribute it for use. The growth of Western Minnesota, Dakota, Wyoming, Montana and Idaho depend on the ability of their expanding community to obtain lumber for building purposes. A dog-in the-manger policy of restricting the sale of these lands to pre-emptors, and by auction sales at long intervals, will not contribute to the progress of the New Northwest. It is not sufficient to say that a few capitalists should not be allowed to monopolize Minnesota pine. Capital will control it in the end, despite all that can be done to prevent it. It will be manufactured and distributed more economically by a few capitalists than by hundreds of owners of limited means.—*Northwestern Lumberman.*

A BOTANIC GARDEN.

The current number of the *Farmer's Advocate* has the following suggestive paragraph:—In a paper by Mr. Charles Gibb on "Trees and Shrubs of Northern Europe and Asia," in which he records his observations on forestry and horticulture in the fruit-growing areas of the Russian Empire, the author alludes to the lack of botanic gardens in Canada. These institutions are to be found throughout Europe, even in Russia and most of the tropical and other colonies of England, for the interchange of botanical products growing in similar climates. "That this great Dominion of Canada," he says, "which stretches from the Atlantic to the Pacific should be without a botanic garden or a series of such gardens, is a fact without parallel in British colonial history." We cannot think of a city or town in Canada which has a more suitable and beautiful spot for a botanical garden than Saltor's Grove, near London, Ont. And in what other city in our Dominion can such assistance for the successful organization and management of such a most elevating school be found as with us? We need only mention the names of Wm. Saunders, Esq., F. R. S. C. &c.; Dr. Burgess, A. R. Murdock, and so many others. By all means have a botanical garden at once, and let London have the honor of having such a worthy addition to our fine schools and colleges.—*London Free Press.*

THE Bohn Manufacturing Company, of Winona, Minn., has taken a $25,000 contract to supply all the woodwork for the new building of the Northern Pacific road at St. Paul. The entire inside finish will be in Wisconsin red oak. The same company has the contract for trimming what is expected will be the finest bank building in Dakota, to be erected at Pierre.

A DESPATCH of July 9 from Portland, Oregon, says:—Tremendous forest fires are raging south of Ralama. Six miles of railroad and two locomotives have been destroyed at Oak Point logging camp. The loss reported up to this morning is $200,000. The flames extend for miles and are so fierce that it is unsafe to attempt to investigate the losses. It is believed the fire will continue until it rains.

A correspondent of the *Northwestern Lumberman* says:—New England in those good old days was a well-wooded section; as to that matter, it is far from being lumberless to-day. In certain sections there are large tracts of woodland which, if properly protected, will within another decade prove a valuable source of profit to its owners. Investigation goes to prove that New England is well adapted to the growth of timber, especially white pine, and who knows but in a few years those of us who may live may witness the shipping of New England pine, the same as to-day pine is shipped to us. In parts of Maine, at this time, pine is being cut, from which large quantities of good width aud strictly clear in grade are sorted out. Large quantities of clear strips are cut, which are used by moulding manufacturers, who in former times used western strips.

THE Grand Haven *Courier* says:—G. W. A. Smith, this week closed a bargain with Chicago parties for the firm of Smith & Field for 1,100 acres of choice pine lumber on White river, estimated to cut 30,000,000 feet. Average haul, one mile to the river. The most of said pine is within a mile of their old camps. Consideration $120,000.

THE *Timber Trades Journal* says:—The fact of the present low prices is causing a curtailment of the production at several of the shipping ports; and we hear that some of the largest concerns in Sweden have ceased night sawing, confining all their operations to day work, and as the night cutting has been carried on somewhat extensively hitherto, this action on their part is likely to make a considerable difference in the supplies.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

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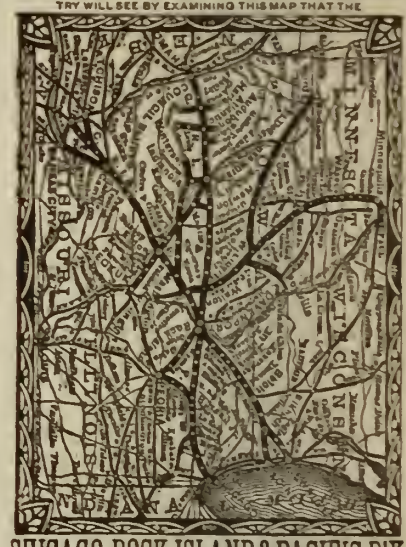
Permanently Cured—No Humbug—by one Month's usage of Dr. Goulard's Celebrated Infallible Fit Powder. To convince sufferers that these powders will do all we claim for them we will send them by mail, **post paid, a free Trial Box.** As Dr. Goulard is the only physician that has ever made this disease a special study, and as to our knowledge thousands have been **permanently** cured by the use of these **Powders. We will guarantee a permanent** cure in every case **or refund you all money expended.** All sufferers should give these powders an early trial, and be convinced of their curative powers.

Price for large box $3.00, or 4 boxes for $10.00, sent by mail to any part of the United States or Canada on receipt of price, or by express, C. O. D. Address

ASH & ROBBINS,
20L24 **360 Fulton Street, Brooklyn, N. Y.**

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



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By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

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2. It is devoted to the development and utilization of our forest wealth.
3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☛TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

———CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM———

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion.

AMERICAN SAWS: We represent Four of the Best American Saw Factories

SAVE YOUR TIMBER
By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute, on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW

No. 1 TOOTH.

With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. EXTRA BITS (per 100) No. 1. $9; No. 2, $8.— (per 1000), No. 1, $80, No. 2, $70.

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

VIZ.

AMERICAN SAW Co.
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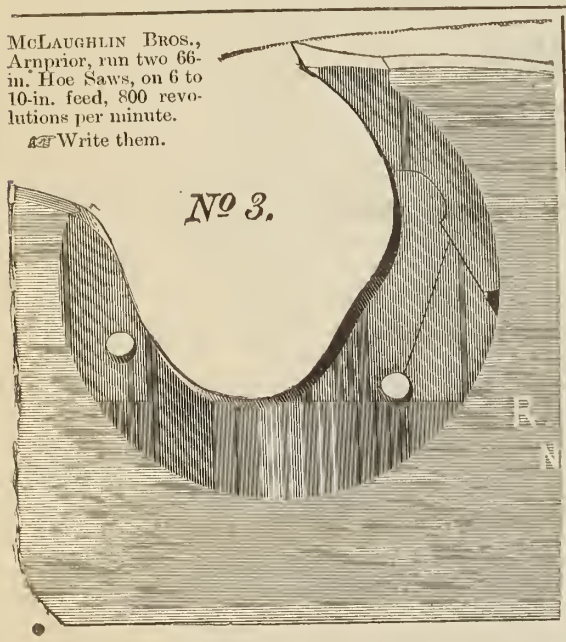
Inserted Tooth, BIT TOOTH, AND SPECIALLY THIN SOLID SAWS

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

McLAUGHLIN BROS., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

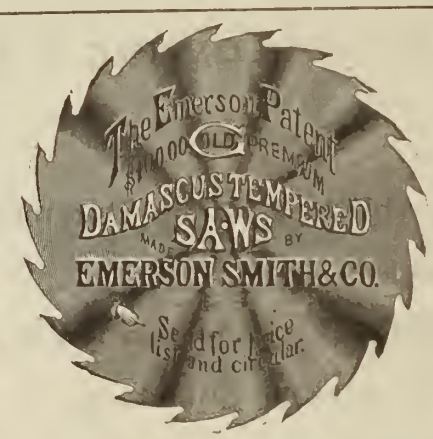
Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut repesents usual size tooth, one size larger and smaller made. Send for particulars and prices.

SAVE TIMBER



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Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows: 54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56: 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

NO EXTRA PRICE FOR THIN SAWS.

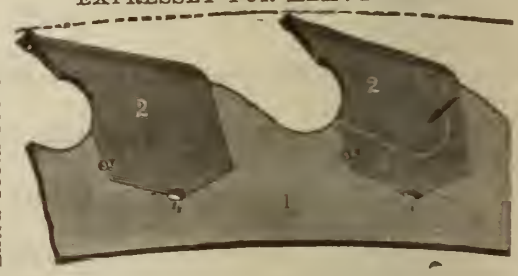
EMERSON'S LUMBERMAN'S CLIPPER SAW

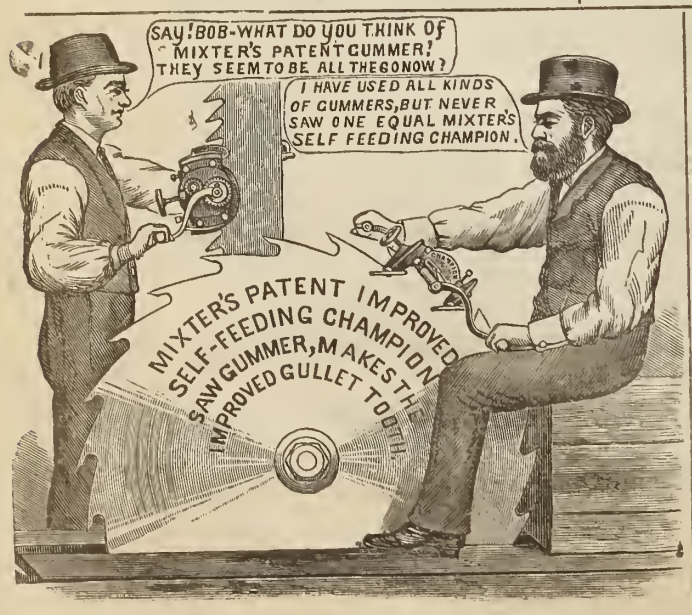
Can insert one tooth for every inch in diameter of Saw.

Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.





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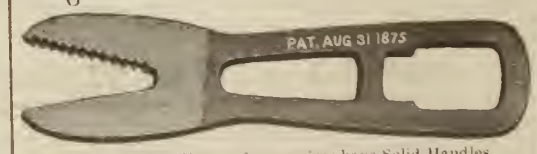
5 sizes, grip from ½ to 3 inches, Iron. Solid Steel Jaw. Price 50c. to $5 50.



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SAW GUMMERS:—Stone's Original, large and smal size Mixter's Self-feeding Champion; Emery Wheels and Stands

SAW SWAGES:—Hoe's, Emerson's, Mixter's, and American Saw Co.; from $1.50 to $6.00.

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Band Saws, Scroll Saws, Rainbow Saws for felling trees, American Shingle Saws, Lace Cutters. Cant Hooks. Flue Scrapers, Leather, Cotton and Rubber Belting.

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WORTHINGTON and BLAKE'S PATENT STEAM PUMPS. ECONOMIST PLANER and MATCHER COMBINED, large range of work, light, handy, durable, cheap.

Ewart's Detachable Chain For Log Jacks, Refuse Carriers, Sawdust Carriers, all sizes, Live Rolls, Tranfers, Slow Speed Driving Belts, Tie Loaders, Slash Tables, Trimmers, Lumber Sorters, Shingle Block Elevators, and many uses about a saw mill.

HIGH CLASS HEAVY and PORTABLE SAW MILL MACHINERY our Specialty.

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Send for New Price List and Chain Circular. Mention this Paper.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 3. PETERBOROUGH, ONT., AUGUST 1, 1883. NO. 15.

The New Orleans *American Lumberman* calls in question our criticism of Southern pine as a material for car sills. It claims that it is not brittle or lacking in toughness of fibre, that experiments prove it to rank very high as a weight carrying wood, and that its specific gravity is considerably less than that of white oak.

Several kinds of hardwood lumber are gradually coming into use which a few years ago were unnoticed. Beech is one of them. It is cheap and abundant, while the more popular hardwoods are becoming comparatively scarce and consequently high priced. Beech has a fine grain, is quite durable, and is used in the manufacture of school and church furniture, chairs, and to a certain extent in furniture. The red variety has a handsome appearance and can be made to imitate cherry.

A Winnipeg correspondent says:—Building continues fairly active, but only for actual requirements, not for expectations. The speculative element is generally absent. Carpenters and laborers are far in excess of demand. The drives down the Red River are arriving slowly, Mr. Sprague being the only one who has received a respectable instalment. There is low water this season; the same condition prevails on the Assiniboine, but if anything in a greater degree. Much of the stock will, no doubt, be carried over to next season.

THE QUESTION OF WASTE.

There is more absolute waste in the manufacture of lumber than in that of any other line of goods. In this respect the lumbermen are far behind all other manufacturers. Their enterprise and sagacity seem to be exhausted in increasing the amount of their output and decreasing the amount of the saw bill, while 30 per cent. of their logs go to waste and is absolutely worthless. What small proceeds are obtained from slabs sold are eaten up by the expense of getting rid of edging and sawdust. Here and there the more enlightened saw mill men have attempted to make something of what they call nothing, but in the usual run of mills the effort has been to get the cost of throwing it away down to the lowest point. One concern in Minnesota grinds up all its edgings and small slabs, and runs the grindings together with the sawdust by means of conveyors to a dumping ground where they lie and rot until winter, when they are used under the boilers of a neighboring machine shop. Most of the large mills run their edgings, bark and sawdust into burners where "their fire is not quenched" from May till December. At Minneapolis the stuff is dumped into the river, and causes much profanity and many legal proceedings on the part of the St. Paul people below.

The amount of fuel thus destroyed every year is simply stupendous. Anyone who has watched ton after ton of material, good to make steam with, to make paper fibre of, to extract wood acids from, dumped into a $10,000 burner, run at a pretty heavy expense, cannot help feeling that terrible waste is one of the characteristics of the manufacture of lumber. Impressed with this conviction, the *Lumberman* has watched with closest interest, and has always noted all efforts to utilize the waste. Among others, it has been especially interested in the experiments of Mr. W. H. Smith, of this city, carried on during the last three years. Mr. Smith has been backed up financially by several Chicago lumbermen, among whom the Messrs. Houghteling, of the Menominee River Lumber Company and the Mackinaw Lumber Company have been been most active. These gentlemen, incorporated under the name of the Smith Consolidation Company, have been unwilling to bring the process and machinery before the public until its value was fully demonstrated to their own satisfaction and to that of other competent judges. We are now glad to bring before the manufacturers a process so practical and so well backed up by practical lumbermen.

Mr. Smith's experiments demonstrate that the sawdust from saw mills can, at a total expense of 70 cents per ton, be consolidated into blocks weighing from 60 to 65 pounds to the cubic foot, and having a steam producing capacity equal to Illinois and Indiana lump coal. One ton of this consolidated sawdust will make more steam than two and a half cords of slabs, and will take up but one-tenth as much room. The fuel makes no preceptible smoke, no clinkers, and has no sulphur or other ingredient injurious to flues. It can be made of any size and shape, and makes a clean fuel for domestic purposes. The company has a written tender for 1,000 tons a year from one house in Chicago, made after undergoing a rigid competitive trial with a dozen kinds of coal. The company claims that Chicago will use hundreds of thousands of tons as soon as it is introduced. The fact of it being a smokeless fuel ought certainly to make it a favorite.

The process of consolidation is as follows: The sawdust is run through a drier and the moisture expelled, and the dust warmed up to a point where the resin is softened and exudes from each particle. While in this sticky condition it is run into the consolidator and impacted into solid blocks, the exuding resin becoming the medium of cohesion. No foreign substance is in any case admixed. The consolidator consists of a heavy steam hammer operating upon the material contained in one of the group of three steel molds. The molds being passed through one-third of a revolution at each movement brings them under the hopper for filling, the steam hammer for consolidating, and the discharging hammer for discharging the mold of the block just formed, in such manner that the three operations occur simultaneously. One blow of the hammer usually suffices to consolidate the block, which weighs from ten to thirty pounds. Four blocks per minute can be readily made. The capacity of the machine represented is 3,000 pounds of fuel per hour from white pine sawdust. It has just been finished for the Rathbun Company, of Deseronto, Ont., who cut about 50,000,000 feet of lumber and who have expended thousands of dollars in the utilization of its waste, which investment is paying handsomely.

The machine will take up, in connection with the drier, a floor space of 12x18 feet, and will require about thirty-five horse-power. The profits of consolidating sawdust should be very large. The fuel costs 70 cents a ton delivered on board of car or vessel at point of manufacture, and is worth about three times as much per ton as slabs are worth per cord. At Menominee, Mich., slabs sell in large quantities to tow boats, propellers, etc., at $1.25 per cord, which would make the consolidated fuel worth over three dollars per ton. A machine turning out 15 tons per day would clean up a net profit of say $2 per ton, or $30 per day; or, say $5,000 for the sawing season. It might be said further, that the process applies equally well to planing mill shavings, and furnishes a solution of the difficulty of disposing of the bulky offal of city planing mills. The mill would also save the present cost of disposing of the sawdust.

The usefulness of the present process is not limited to sawdust, but extends to all kinds of loose, coarse and bulky materials. The table given below is based upon three years' careful investigation and practical experiment:

COMPARATIVE TABLE SHOWING THE REDUCTION OF VARIOUS MATERIALS BY CONSOLIDATION.

	Bulk unconsolidated per ton of 2,000 lbs. Cubic ft.	*Bulk consolidated per ton of 2,000 lbs. Cubic ft.*	*Wt. unconsolidated. per cubic foot. Pounds.*	*Wt. consolidated per cubic foot. Pounds.*
White pine saw-dust	400	33	5	60
White pine shavings	800	33	2½	60
Yellow pine saw-dust	333	31	6	65
Yellow pine shavings	666	31	3	65
Tan bark	125	31	16	64
Bran	153	31	13	65
Middlings		28	26	70
Ground feed	76	33	26	60
Corn meal	76	31	35	65
Cotton compressed	57	..	..	56
Hay, straw and grasses in mow	....	..	..	..
Hay, in common bale	500	31	4	65
Bituminous coal dust	142	31	14	65
	40	25	50	80

The *Lumberman* has been fully posted in the facts of the case by the president of the company—J. L. Houghteling, treasurer of the Mackinaw Lumber Company—to whom we would refer those of our readers who desire to investigate the matter further.—*Northwestern Lumberman.*

THE PACIFIC HEMLOCK SPRUCE.

Great forests of the Pacific hemlock spruce (Morton's) extend along the coast from California to Alaska. It is one of the most beautiful and delicately-foliaged of evergreens, and very spiry, with a broad ground base. They are even more spiry than the eastern Canadian. These tall spruces, farther north, are clad in denser masses of darker green verdure, clothed from the base 100 to 150 feet upward, or more. The body is from two to six feet, and occasionally eight feet in diameter. But along the coast territory mentioned the tree is only from 60 to 75 feet in height, and rarely over two feet through. The thickened lower branches aid in tempering the clime in all seasons, and the foliage, unlike redwoods and their like, precipitates little moisture. It is noteworthy how admirably this tree rallies and thickens in the top when broken off by the tempest—which often takes the conceit out of its too ardent aspirations, nature's testimony that it bears training to any reasonable extent, responsive to the bidding of the Master. It is one of the best shelter trees known, wherever it will flourish at all, whether for the orchard, garden, yards, or for game of all sorts.

Contrary to experience and observation relative to most other timbers, the old matured heart-wood is more perishable than the young and sappy poles and branches where they are exposed to the seasons, the latter being less shaky, and absorbing and retaining moisture less readily. For this reason the heart-wood is almost solely used for interior work, where it is little subjected to the extremes of outer temperature, as in the case of rude rafters, where, duly seasoned with the bark on, they are singularly lasting and very elastic, with much of the snap and spring of the yew and cedar, combined with a due degree of strength.

Only in the cold forests of California, contiguous to rivers or cold creek banks at the southern limit of its growth, is the Pacific hemlock spruce never found much over 2 ft. in diameter, and about 60 or 80 feet high. Up to extreme age it preserves the perfect, symmetrical, spire form, and is altogether less marred by unsightly dead limbs, than its kindred of the east. The same observation applies to Alaska. If the tree were more exposed than in its native coast clime, it might take on a somewhat broader conic style. In the young state, say from 10 to 14 feet high or more, the bark is relatively smooth and even, branches exactly level, thin, fan-like, long and slender, with cherry-brown bark.—*Lumberman's Gazette.*

OUTLOOK OF THE COMING HALF-YEAR

The *Timber Trades Journal* says:—The Board of Trade returns for June were not issued in time to be taken notice of in the present number of the *Timber Trades Journal*, but the expiration of the first six months of the current year, nevertheless, calls for a few remarks as to the aspects of the trade and the indications with which it begins the second half of the year, 1883.

We have already pointed out that the season has been full of contradictions, and we may add that the usual effects have not followed causes with that regular succession which generally enables experience to predict, with tolerable accuracy, how things are going to rule in the immediate future. Take our Liverpool report published last week as an example. With a continuence of moderation in the import trade we naturally look for an improved demand and firmer prices, especially when there is a tendency to rise in the rates of freight. But no, these local advantages appear to be of little or no account in Liverpool, for the report begins by stating that they have "not affected prices to any material degree." It claims some credit for an improvement in the price of spruce deals and birch timber, but the trade in Liverpool must be thankful for small mercies if it is satisfied to see the best sizes and qualities of St. John deals fetching no more at the public sales than £7 7s. 6d., while the highest price to be got for 3x9 did not exceed £7 5s. per Petersburg standard, or at least 5 per cent. below the public sale prices there twelve months ago, and they were understood at that time to be selling badly. It is also intimated that tonnage for the spruce deals ports was not so easily obtained as usual, yet the average price of the deals sold by Messrs. Mackay on the 22nd ult. was not more than £7 2s. 6d. Last year it was made to appear as if the supply of spruce were really falling off, as the shipments from the lower ports fell away considerably in comparison with those of 1881. But it seems to have been not for want of the goods out there so much as buyers on this side, or a paying market to send them to. For, instead of a diminished supply this year, which would be the case if the difficulty lay with the lumberers in getting out the usual quantity, it is seen that shipments up to date are far greater than they were then. In fact, the returns from Miramichi for spruce and pine have more than doubled upon last year at this time, the figures being, for 1883, up to 14th June, 28,394,696 feet super., against 1882, 13,-015,026 feet, and it is doubtless the evidence of this fact which keeps down the price on this side. For who will speculate in a material which is already coming forward faster than it is likely to be wanted?

But the sales recorded in the Clyde in the same number present the trade under a far more favorable complexion. Some pine deals, all the way from Oconto, in Wisconsin, fetched, for best sizes—sold by Messrs. Edmiston & Mitchells, at Glasgow, on the 25th ult.—3s. 8d., and even 3s. 9d., per cubic foot, the last price being at the rate of nearly £31 per Petersburg standard; while 2nds, from the same locality, fetched 2s. 9d. or as much as £22 13s. 9d. per Petersburg standard; and 1st ends, 6 to 8 feet, did not go under £24 15s. Even 4th quality regulars went to nearly £10. Norwegian and other battens also fetched fairly remunerative prices, though, coming by way of Grangemouth, they had to pay larger proportionate freights, and this too in the face of a larger importation both at Glasgow and at Grangemouth.

At Greenock, however, things were less promising. Waney board timber at 1s. 10d. per foot cube is a shilling below prices that are not uncommon at Glasgow.

The object is to come at the prevailing tone of the trade in various localities in order to ascertain to which side, for better or for worse, the balance inclines. Now Cardiff has been complaining of dulness in the timber trade throughout the spring; but all at once it turned about and began to look at things in quite a different light, "merchants are clearing out their stocks with more rapidity, and some are again in the market for buying." Again, "the market both for mining timber and pit-props shows a great deal more animation, and a smart rise of two or three shillings per load has taken place." This statement is supplemented by an admission that the timber market had been "for some time in a depressed condition," and that the advance would "be welcomed by importers." There is no question of a better state of things now existing at Cardiff than the trading authorities have been previously able to recognise since the season began, and as Cardiff is a kind of local metropolis which gives the cue to an extensive district, a trade revival there reanimates the whole of the south coast of Wales from Newport to New Haven. We may, therefore, assume that trade on the northern side of the Bristol Channel is in a much more satisfactory state than it has been for some months past.

Crossing over to see what is doing at the great emporiums of the east coast, we get at the following paragraph in our last week's Hull report: "This market is remarkable for its scarcity of Canadian birch, mahogany, and best Quebec pine, and, if holders can be found for these goods, the prices are very high."

And further on we are told that at West Hartlepool "a very rapid development of activity has been witnessed in this market since our last week's report. As about fifty ships had arrived in the interval this might moan merely that a good deal of work was going on in discharging and landing their cargoes. But on this point we are not long left in doubt, for we have the following affirmative explanation: "As regards the demand, an active trade is doing from the ships discharging. Undoubtedly the stocks in the interior of the country are at a very low ebb, as from all the shipments large quantities are going away inland from the quayside." It is seldom that our correspondents commit themselves to circumstantial optimism. Their testimony may therefore be accepted without reservation when they boldly declare an improvement and give a substantial reason for it in the same paragraph. Nor are there wanting equally favorable conditions of the trade in Great Grimsby, which last year was thought to have imported more wood than was good for it in its attempts to contest with Hull for pre-eminence in trade of the Humber. Up to the end of May, Grimsby had not imported anything like half the quantity that it did last year. And what is the cry now? "We are surprised at the small amount of arrivals for the time of the year, and cannot think the weather has been the case of no more ships coming to port, as we are well aware there is a good demand for all kinds of timber and yellow pine especially. . . We hope to chronicle a greater amount of arrivals next week."

This representation of the state of trade in Grimsby requires no comment. When a port that was understood only a few weeks back to be overflowing still with its last year's supplies is anxiously looking for further arrivals (and some heavy ships had just been announced too) we need not ask any further questions as to the progress of business there. In the Tyne and the Wear also the reports are favorable, and the shortness of the supply in comparison of the importation of last year is spoken of in both as if there were already, or would shortly be, plenty of room for more.

The Scottish ports on the east coast, from Leith to Aberdeen, seem to be in no want of trade, and in no apprehension of supply exceeding the demand. Nor can we detect anywhere that continuance of dulness in the trade which was so marked in the early months of the year. On the contrary it appears in all directions that there is a considerable revival of business and that the retardation of the spring shipments abroad has had all the beneficial effects at home that we predicted for it.

So much has been said of the spiritless nature of the import trade, and the general dulness prevading the country, that it seemed desirable to inquire a little more closely into the question and ascertain from recorded facts whether there were any gounds for expecting the latter part of the year to be more propitious for the trade than its beginning.

Nor has the result been unsatisfactory. Without a critical inquiry, from place to place, and giving undue importance to isolated circumstances, it has been considered sufficient to take the prominent facts recorded by responsible representatives of the trade in some of our chief depots—whose statements are open to contradiction if they are colored with their own peculiar views, and do not fairly record the facts that are taking place in the trade of the port they are speaking of. Of these the reader can form his own judgment. But it seems absurb, in the face of the extracts we have here brought forward, to persist in believing that the timber trade is not in as fairly a thriving condition now as it has been at this time of the year for many seasons past. Whatever may have been the trade of the spring, that of the autumn is likely to restore its equilibrium. Let us hope also that it will render the year, as a whole, one to be remembered, as by no means among those that were unfavorable to this branch of trade, and that important section of the community who have invested their skill and their capital in it.

NEW BRUNSWICK.

The St. John, N. B., correspondent of the Montreal *Gazette* writes as follows:—The Crown lands are the principal source of local revenue which the province possesses, and their management is one of the most onerous tasks of the provincial executive. The usual war between large and small operators goes on, and there is the customary tendency toward waste of lumber on the part of temporary lessees. The late Government, for the purpose of breaking the power of the timber ring to some extent, sold licenses to cut for one year only, thus exposing the operator to competition every year. This regulation was kicked against vigorously by the larger number of operators, who protested that they would be prevented from making necessary improvements, such as the clearing out of streams for driving purposes, if they had no guarantee for more than a year's tenure. The Government remained firm, however, and no disastrous consequence followed the adoption of the short-lease rule. The big men bought timber berths as usual, and the little men squeezed in between them and secured small areas. I am told by many small operators that the one year regulation has been beneficial to them in many ways. They say that the Jumbos of the business have been more gracious to them, more tolerant of them, and much more disposed to give them sub-contracts on fair terms when there was the possibility of their bidding on the land and operating upon it on their own account. The change of Government was effected, to some extent, by the influence of the lumber kings, and the new men were asked to display their gratitude to the McLeods, Gibsons, Snowballs, Kings and others, by selling ten-year leases of timber berths. The new regulations have just been published, and show an attempt to compromise between the demands of the conflicting interests. Two sets of licenses are: The first is for one year, with the right of renewal for the two following years, which is really a three-year license. The dodge of calling it a one-year license is merely a quibbling attempt to make believe that the one-year principle has not been wholly abandoned. All long-time licenses are practically on the same plan. That is, the holder pays every year, and abandons it when he ceases to find it profitable. After this substitution of the three-yoar for the one year licenses, which, it is fondly hoped, will not be too displeasing to the small-fry lumbermen; an attempt is made to keep the promise to the ear and break it to the sense in regard to the long licenses that were promised the big fish in reward for campaign services. Five year licenses are offered with the proviso that those who accept them must pay $1.25 per thousand stumpage instead of the eighty cents which holders of the shorter licenses are asked for. This is the largest official joke of the season, but the lumber kings will hardly smile at it or own it. I am safe in predicting that not one five year lease will be asked for or taken on the terms proposed. It is absurd on the face of it to offer such conditions as these to men of business. The Government organs graciously intimate that ten year leases may be offered, the stumpage to be placed at $1.50, and the milcage reduced. Thus will the campaign promises be kept, after a fashion. If the Government can find anybody to pay $1,50 per thousand as stumpage, on condition of having a ten year lease, it will be perfectly justified in adopting the long lease principle, but I do not believe any such men are to be found—that is, if the lands are sold according to custom, subject to the payment of an upset price of $8 per square mile yearly. The hemlock bark policy of the new Surveyor General has proved so unsatisfactory that the Government organs are meanly laying the blame of its oppressive character on the scalers. The new regulations require payment of stumpage, in addition to the bark tax, on all the logs that are peeled, without regard to their fitness for sawing, and, as a very large percentage of the logs is perfectly useless for any purpose, the regulation is peculiarly oppressive. There has been, I know, a great deal of merchantable hemlock left in the woods to rot, after having been stripped of the bark, and the regulation was, no doubt, inspired by a desire to remedy this evil, but it should have discriminated between merchantable and useless logs. This is a great hemlock country, and an immense business is done in the shipping of bark and the manufacture of bark extract. The latter industry, though of recent origin, has developed into large proportions, and anything which should cripple it would be a provincial loss of no small magnitude. The Messrs. J. & J. Miller & Co., whose head offices are in London, and who have extract factories in Hungary and Quebec, have the most extensive works of this kind in New Brunswick, the chief of which is on the Miramichi, where they keep two or three small steamers almost constantly employed in towing bark scows to the factory and loads of extract to the railway station. They are genial, enterprising gentlemen, very popular with the large communities they afford so much employment to, and the Government must soon see the necessity of amending the regulations which interfere so much with their business. The true hemlock policy, in the opinion of those who have given the subject much thought is the placing of an export duty on the bark, so as to encourage its manufacture into extract or leather before exportation.

YOUNG'S POINT.

From Our Own Correspondent.

THE FASTEST TIME ON RECORD.—Thirty thousand logs belonging to Messrs. H. B. Rathbun & Son were brought from the head of Stony Lake to Young's Point in six days by the well-known foreman, Robert Horan, and from Mount Julien to Young's Point with thirty thousand ties with a hand capsin and fourteen men in three days. This is river driving extraordinary.

JULIENS' LANDING MILL.—The saw mill lately burned down owned by Mr. Hull, of Lakefield, is, it is said, to be rebuilt this fall. Its destruction by fire was a great loss to the settlers in and around that section of Burleigh.

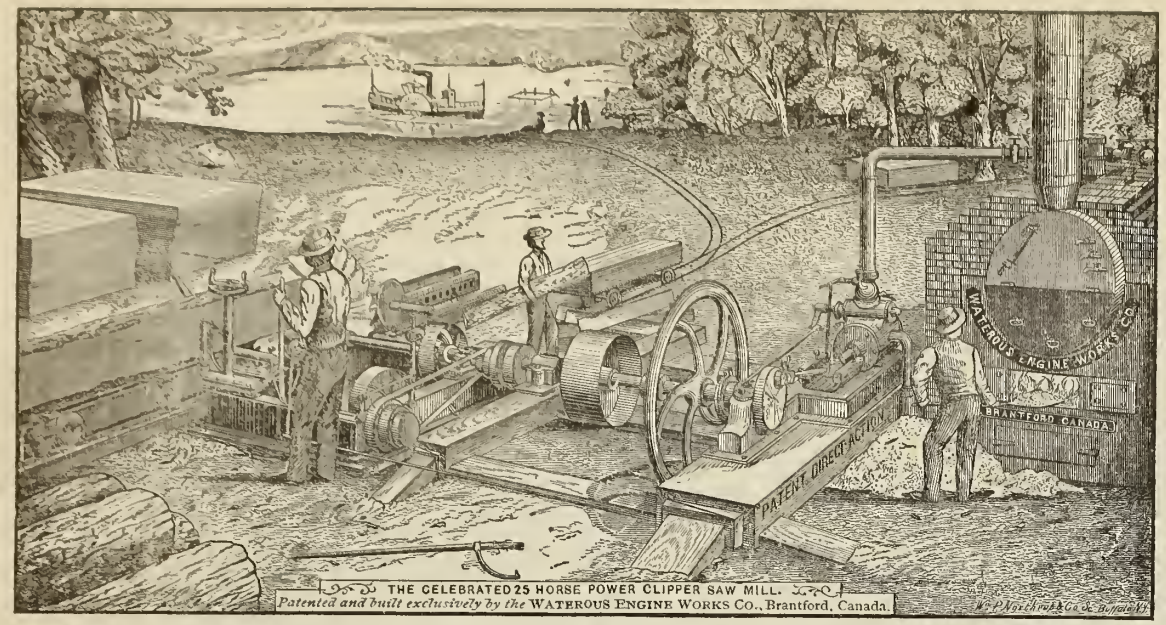
THE DRIVES.—There are no less than five large drives between here and Lakefield. That of Messrs. Rathbun & Son has been occupying the entire river from Lakefield to Rice Lake for the last three weeks, and very likely there will be some fun before they complete their entire lot of logs, as some of the drives behind them are determined to have their logs run to their respective mills without any more delay. One or two foremen having already made threats to run into them and get mixed up, and sort out at Harwood. The first to run to Lakefield is Mr. Chalmers' drive of logs, P. Cassidy, foreman, *en route* to Hilliard's mills. Ullyott & Saddler have two large drives, Jno. Barr and F. Bell, foremen, *en route* to Harwood mills. Messrs. R. & G. Strickland also have a drive *en route* to Lakefield mills. There are four more drives besides those enumerated to pass through here, which will complete the season's work. It is to be hoped all will be run over here before the A. C. A. begin their camp in August.

A Good Example.

The Quebec *Chronicle* says:—It is with pleasure we notice that the Ontario Government, following the example of several States in the Union, and perhaps quickened to action by the steps taken by the Quebec Ministry, has turned its attention to the important subject of Forestry so far as that science relates to the conservation and propagation of trees.

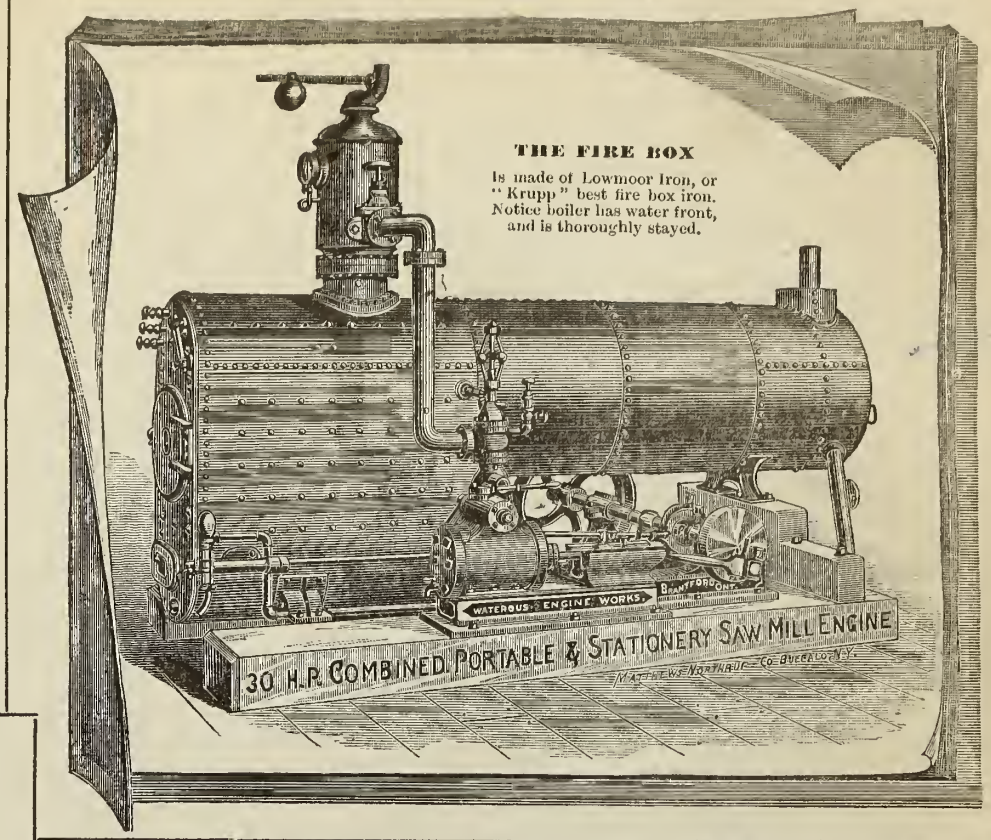
Semi-Portable and Portable Direct Action and Belted Saw Mills!

TEN DIFFERENT SIZES.



Above cut represents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

☞This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.

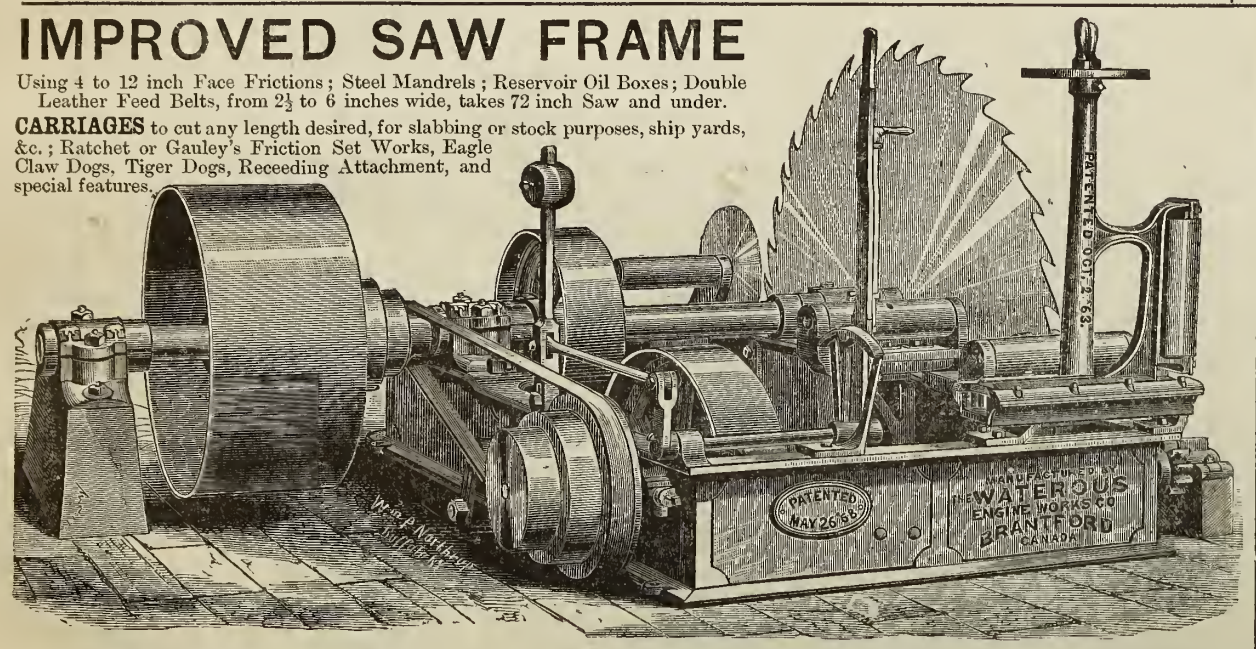


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec.
Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

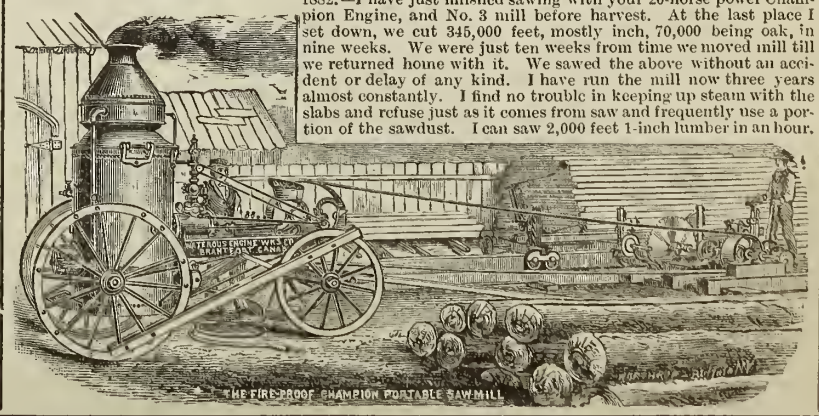
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Rauche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon.
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co.,
W. W. Stewart, Montreal

Double Edgers, 2, 3 and 4 saws; Automatic Lumber Trimmers, 5 to 9 saws each; Log Turners, Slash Tables, Log Jacks or Haul-up of all Capacities, Endless and Single Chain; Automatic Log Rollers, Transfers, Live Rolls, Shingle Machines, Drag Saws, Knee Bolters or Block Splitters, Shingle Packers, Gang Lath Mills, Stave Machines, Automatic Sawdust Feeders for Gangs of Boilers, Sawdust, Slab and Refuse Conveyors, Elevators, Pickering Governors, Worthington and Blake Steam Pumps, American Planing and Matching Machines, American Saws, Solid and Inserted Tooth, Extra Thin Circular Board Saws a specialty, Swages, Gummers, Emery Wheels, and all kinds of Saw Mill Furnishings kept in stock.

☛WATEROUS ENGINE WORKS CO., Brantford, Canada.

Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

FOREIGN WOODS.

There has lately arrived in New York a cargo of logs from Havre, of the kind known as Circassian walnut, and comprising among it some trees of extraordinary size. It does not apparently differ in grain or quality from American walnut. A dealer, who is familiarly acquainted with the nature and extent of the importations, said to a New York *Commercial* reporter that the cargoes had arrived here because of the scarceness of our timber. "Formerly," said he, "Ohio and Indiana were covered with excellent black walnut, but the former state has been cleared off for years, and the latter finds her power of answering the demand greatly lessened. These states are comparatively woodless, and few very fine trees are found standing. I have seen logs brought in by the Katie, and cannot notice any difference between them and our timber, except, perhaps, they are a little redder. They came here from Havre, but where they were grown I cannot say. The United States still have much wood, but the immediately accessible supply is rapidly diminishing. We have for a long time imported the more precious woods, and I suppose the time cannot be far distant when other woods will be brought in. There is no duty on them, and in many places where they can be obtained there will often be short cargoes of other things."

A prominent firm of importers said: "There never has been a time when some of this commodity was not brought in; just as in Brazil to-day, covered as it is with forests from end to end, they import pine and other lumber from the United States and Canada. But until lately the kinds sold here have only been of the varieties we do not grow. Prominent among them is Spanish cedar. It seems to have some qualities which American cedar does not. Its use is almost entirely for cigar boxes, while the Florida cedar has its chief utility in lead pencils. What is not consumed here is bought by the Fabers, and other European manufacturers, and taken abroad. The size of the Spanish logs is from twelve inches to three feet square, which is true also of mahogany, the next largest article of importation. This is very rarely used in a solid shape, but is worked up in veneers, the cutting being done in this city and elsewhere in the union. For a long time this wood defied the ordinary cabinet maker, but the machinery now in use is capable of sawing off a shaving scarcely thicker than a sheet of paper with the greatest of ease. Mahogany has been out of favor for a number of years, but of late seems to be regaining its hold. The new methods of combing it with lighter woods relieves it of that sombreness which formerly characterized it. There never was a time, however, when some people did not admire it and have articles of furniture made from it. Next in order to these in value I would place rosewood. This comes from Rio de Janeiro and Bahia, and is more largely used in pianos than for anything else. Many people admire it very much. Its value depends upon the richness of its color and upon its figure. It is sold differently from other woods, being disposed of by the pound at prices varying from two to seven or eight cents. The importation of mahogany in this country last year might have been about 25,000 logs; of cedar, 25,000 logs, and of rosewood, 12,000 logs."

Another importer thought that we had much to gain by the introduction of more varieties of foreign woods. "There has grown to be a too great sameness about our household furniture and decorations. Those who have watched the trade for many years can remember when curled maple was the rage, and when cherry was considered the proper material out of which to make everything. Mahogany and black walnut have each had their day, although they will still continue to be used largely. The last fashion has been for French walnut red wood. But there exist in South America and Africa, to say nothing about Asia, many trees of whose qualities we are almost entirely ignorant, and which would serve an admirable purpose in decorating our homes. We still have considerable satinwood, although that is now out of favor; ebony is of great value in affording a contrast, and lignum-vitæ is used for blocks to pulleys and similar purposes. A considerable quantity of these various kinds are imported year by year, but not so much as we ought to have, considering the wealth of our people and their disposition to spend money."

"Do the native woods of the United States compare with those imported as to beauty?" inquired the reporter."

"No," was the answer. "The foreign woods are the hardest, have the best color and the finest graining, and the most specific gravity. Lignum-vitæ is so heavy it will sink in water. But we still possess an admirable variety of woods. Our oak is excellent, although we occasionally import some from England, as it is of a darker color and has more knots. No material for general use can be more effective than black walnut, and our butternut, ash, redwood and other trees give us a variety to choose from. Bayard Taylor had much of his house finished off in pine, and it looked well. The furniture which is made in Grand Rapids is sold in considerable quantities in Scotland, and it is sent abroad more or less all over the world. There is no reason why the rarest products of the East Indies and of Africa should not be used here, except the difficulty of getting people out of the ruts of old habits."

The total imports of wood and manufactured wood for the last year reported was $14,532,604. Of this, there was for box-wood, $48,991; cedar, $330,962; ebony, $72,334; granadilla, $3,111; lancewood, $10.634; lignum-vitæ, $60,-839; mahogany, $569,412; rose, $260,757; sandal, $702, and all other cabinet woods, $315,-410.

ECONOMY IN SAWING.

The more economical production of lumber is a matter which is attracting considerable attention from mill men in all parts of the country. It is claimed by many sawyers that it is impracticable to run large circular saws of a thinner gauge than those now in general use. This impractibility is probably more fancied than real, and in a few years we expect to see thin circulars running as successfully as thick ones do now. Mill men cannot afford to waste so much good timber in sawdust. Thinner saws are certain to come into general use in the not far distant future, and it would be far better for mill men to adopt and learn to use them at once, than to wait until the scarcity of timber forces them to do so. A practical sawyer writes to a contemporary:—"I started on a 10 and 12 guage saw three years ago, as my previous boss said saws thinner than 8 could not be run. I did not venture on a very thin saw to start with. I ran the 10-guage saw about thirty days; then I had it ground to a 13, it being a 52-inch with 40 teeth. I used it as a 13 until about three months ago, sawing a vast amount of lumber of good quality. I had it ground to a 16 and a double number of teeth put in it. It stands to-day a 47-inch 16-guage saw, and runs as true as a file and as straight as you can stretch a string on an inch-feed in hard oak with plenty of knots. I run my mill with a 10-horse power engine, and have plenty of power. I do not find a thin saw any harder to run than a thick one, if kept sharp. A thin saw requires more filing than a thick one. But I think any saw ought to be filed four or five times a day. I like to see a saw cut keen, with plenty of speed. A saw that drags along at 350 or 400 revolutions does not saw much. Any saw should run 10,-000 or 12,000 running feet or rim measure per minute. I am going to try a 52-inch 16-guage this fall. I think it can be run successfully, with a great saving in timber. We still have some old 'Brogne' sawyers who think nothing but a 6, 7 or 8-guage saw will run, and are ready to denounce thin saws. But I picked the ticks off some of them in this section. The most skeptical one I know of in this section says I have knocked the wind all out of him, and yet he has run a saw mill ever since circular saws came into use."

WALNUT FOR EXPORT.

A southern paper reviews the subject of walnut operations in Kentucky, as follows:—In walnut producing sections, near mines and railroads, even the stumps have been dug from the ground, and the material used in the manufacture of costly veneering. Messrs. Bry & Horn have made Frankfort their headquarters for the purchase of walnut and other hardwood timber to be shipped to Louis Bry, of Berlin, Germany. They began business last March, and have already shipped 2,467 logs containing 675,912 feet of walnut, at an average value in this city of $55 per thousand feet, or a total value of about $37,000. It required 162 cars, costing for transportation $80 per car, to carry the logs to New York, Newport News, and Baltimore. Thence the logs were put aboard sailing vessels and carried directly to Hamburg, at a cost already told of $15,000. These agents claim that Frankfort offers many advantages to buyers, both in the facilities for the purchase of the logs and for the transportation of the freight, which is chiefly carried by the Louisville & Nashville railroad direct to the shipping points. The firm employs an average of 30 men, and pays out to them about $400 per week. These men cut the bark off the logs to relieve them of all superfluous weight, and then paint the ends red as a preparatory course to shipping. The timber is very valuable in Germany, and is used for furniture and other household purposes, just as it is here, but chiefly for purposes of veneering as a means of economy in the lumber. The season is now about over until next fall, when the freshets come to let the logs out into the river, but by that time the firm expects to branch out into the business on a much larger scale, by building log booms, etc., in the head waters of the Kentucky and Cumberland rivers. Mr. William Ray, a well-known Louisville capitalist, who is largely interested in the extensive saw mills of the Cumberland Lumber Company, at Williamsburg, Ky., will start for Europe in a few days, partly for the purpose of negotiating the sale of a quantity of walnut timber.—*Northwestern Lumberman.*

ARRIVALS IN THE THAMES.

The *Timber Trades Journal* says:—Of the long list of 78 timber-laden vessels, reported at the London Custom House this week, 37, or not quite the half were steamers, which, in the middle of the season, when almost any old vessel can trade with the certainty of fine weather, is a further indication of the growing increase in the demand there is for steam tonnage. It is not so long ago when the trade would have been taken by surprise if they had noticed two or three steamers in such a fleet of arrivals as we have to record this week, but now that the novelty is worn off, the immense amount of steam tonnage employed ceases to astonish anybody and is received by the trade as a matter of course. Thirty-seven steamers, out of a list of 78 vessels, means that nearly two-thirds of the of the wood brought has been by steam. As a rule, the sailing ships—allowing for coal and engine space—average quite a third less tonnage than the competitors, and if we deduct that from them, and place it to the account of the steamers, we shall get an approximation of the quantity of timber brought by steamers over that of sailing vessels quite equal to what we have stated. To London, at any rate, this preponderance of steam tonnage is not unexpected, and increases every day. We expect steamers will play the most prominant part in the timber trade to almost every country in the world by and by. To small coast ports sailing ships will continue to trade, but the big depots will be entirely monopolized very soon by the more paying class of vessels.

In the list mentioned, the first of the Quebec spring fleet are noticeable—as usual the Hovding is the soonest in the docks, followed next day (June 29th) by a large vessel, the Victory, but excepting the New York regular liners, there is nothing else from the other side of the North Atlantic.

The list recorded shows a large importation for one week, even in July, and exceeds by ten vessels the number that came the first week of July last year. However, we must recollect that no less than twenty of the recent arrivals are laden with firewood from Northern Europe. Still almost every Swedish and Baltic port is represented with other goods, and a plentiful supply of deals and battens may now be depended on of whatever kind or quality the buyer may be in search of. The fine weather and variable winds have brought us ships from all directions, besides large numbers of steamers.

Freights to London from the Baltic are rather depressed, and we understand there are a lot of steamers, now in the Mediterranean, that loaded out coal unchartered, and ready to accept anything they can get, so that the prospect of any improvement is not encouraging to shipowners. 27s. 6d. Gefle to London and 28s. 6d. Soderham, both steamers, has been done, which we believe are the lowest rates closed this year. The coal trade has been apparently active, the price having risen 2s. per ton, but we do not hear of any advance in the rates as freight, which seem by latest advices to be about stationary. Colonial freights, on the other hand, are firmer. Still there is not much doing. Plenty of vessels are wanted, but the position between the charterer and shipowner is somewhat strained, the former trying to obtain some reduction in the market rate, while the latter is rather inclined to demand an advance. So that, as neither seems disposed to give way, like last year, the season may slip away without anything being done.

That steamships are working at little or no profit seems palpable from the fact which we recorded at the time of a steamer leaving London awhile since in ballast for Miramichi to load deals back at 64s. a standard. We can hardly see how such a voyage can possibly be a profitable one to the owners. The coal consumed and the other expenses might, not unreasonably be expected to almost equal the freight she would earn.

There seems nevertheless to be a tendency to replace sailing ships by steamers, and we expect it will not be long before vessels of the latter class get well into the pine and spruce trades.

BAD POLICY.

The Winnipeg *Commercial* says:—Not many months ago a leading firm in this city which pays spot cash for every thing they buy, wished to contract for between two and three million feet of lumber. They had no intention to go beyond the limits of the province for their supply. But when the dealers were approached their prices were beyond ordinary reason, hanging on to the old boom time rates. Instead of ordering at home then this firm ordered their supply from eastern points, and it is now being delivered at Port Arthur. Two millions and a half feet of lumber would make a big hole in many a lumber yard in this city, and only the grasping avariciousness of those connected with the trade, who thought they controlled everything, is responsible for the result. What we have mentioned is only a case in sample. There are doubtless many others of a similar character.

The *Timber Trades Journal* says:—A considable proportion of colonial stock has been placed since our last communications from Quebec and other of the St. Lawrence ports, and judging by the large inquiry for tonnage, many of the spruce shippers as well must have found a market on this side of the Atlantic for their goods. Still chartering for the reasons mentioned seems to drag slowly on, and if shipowners decline any abatement, those who want ships must give the rate or lose the chance of getting tonnage for the second voyage altogether.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

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WOODS FOR SPECIAL USES.

The following list of woods and purposes for which used will be found interesting:—Shipbuilding—cedar, pine, fir, larch, elm, oak, locust and deal. Wet constructions, (such as piles, foundations, flumes, etc.,) elm, alder, beech, oak, plane tree, white cedar and palmetto. House carpentry—pine, oak, whitewood, chestnut, ash, spruce and sycamore. Machinery and mill-work, frames—ash, beech, birch, pine, elm, mahogany and oak. Rollers, etc., box, lignum vitæ, mahogany and service tree. Teeth of wheels—drab tree, horn beam, locust and service wheel. Foundation patterns—alder, pine, poplar, walnut and mahogany. Furniture, common—beech, birch, cedar, cherry, pine and whitewood. The best amboyna black ebony, cherry, mahogany, maple, oak, rosewood, satinwood, sandalwood, chestnut, cedar, tulip, walnut, zebrawood, ebony aud ash. The elastic woods are ash, hazel, hickory, lancewood, chestnut, yew and snakewood. The tough woods are beech, elm, lignum vitæ, oak, walnut and horn beam. Carving woods—pear, box, lime tree, dogwood and ebony. Scented woods—camphor, cedar, rosewood, sandalwood, sasafras aud satinwood.—*Wood-Worker.*

AN IMPORTANT CHANGE.

The saw-mills recently stationed at Bradford have been removed to Orillia. Bradford's loss is a great gain to Orillia. "It means," says the Bradford *Witness*, "the diverting of the immense traffic to result from the development of eighty miles of the extensive timber limits of Black river from the Northern Railway and Toronto to the Midland Railway and Peterborough. If the canal to connect Lake St. John with the Couchiching is built, and there is little doubt—the distance being only 400 yards and the cost only $30,000—the product of the Messrs. Strickland's sawmills and their timber making operations (their timber on the Black river amounts to 150 million feet) will be sent over the Midland Railway *via* the Missing Link, and will pass through Peterborough. Last year the firm sent 250 thousand cubic feet of timber over the Northern Railway, and this year so far they have sent 125,000 cubic feet. Their timber cut, which amounted to 7,000,000 feet last year, and this year so far to 4,000,000 feet was also sent ov the Northern Railroad. This is only the usiness of one firm, but when the operations of all the other timber and lumber business of the Black river become tributary to the Midland and Peterborough some idea may be formed of the immense traffic that will be diverted from the Northern to the Midland."

DESTRUCTION OF SPRUCE FORESTS BY WORMS.

A good deal of alarm has been created of late, especially in New Brunswick, by reports of the destruction of the spruce trees by worms or borers. As that Province largely depends upon its spruce forests for its export trade the prospect of having them destroyed was well calculated to excite apprehensions and to stimulate nquiry. We observe by the Maine papers that the same decay of the spruce trees has been noticed in that state, especially in Northern Aroostook. There has been already in that district a loss to the owners of the land of tens of thousands of dollars, and the matter has caused a great deal of anxiety. During the present season a noted entomologist is going to Aroostook to look into the cause of the decay and death of these trees, and he will probably be accompanied by Franklin B. Hough of the United States Commission of Forestry, who has lately been in the state making some investigations. A township north of New Sweden was operated upon last winter for the first time, and was supposed to have an immense quantity of spruce upon it. It was found that a large number of the trees were dead. This is true of all the other towns in which the spruce is reported fast dying only from old age, that the young trees are not affected by worms or insects, that in the old spruce the worms follow, but do not precede decay. In order to get at an intelligent conception of the matter the Boston *Globe* obtained the views of a number of practical lumbermen and woodsmen. One old lumberman of Caribou, Aroostook county, who has had charge of a number of townships of land for several years, and who has had great experience in the woods, says that on five ranges of townships the spruce down to eleven inches are dead or dying, and that the young spruce are unaffected. His view of the cause is that about eight years ago late in the fall there were very heavy rains, which loosened the earth, and that the rains were followed by a protracted gale and a hard winter. The root fibres were broken, which caused decay; then the worms followed. On the north-west slope, where the wind had the greatest range, the trees suffered the most. The trees at first at the top present a seared appearance, and year by year death passes towards the roots, some times one side at a time and at other times on both. He says it would be impossible to estimate the loss in Aroostook county.

Other gentlemen well acquainted with the lumber districts of Maine and New Brunswick expressed substantially the same opinion. They agreed that the worm did not attack young and thrifty trees, but only those which had begun to decay, The spruce is not a long lived tree, but grows rapidly and, after it reaches maturity, which is in from sixty to ninety years, begins to decay. We do not know whether a similar state of affairs exists in this Province, but the matter is one which invites inquiry.—*Montreal Herald.*

The Pine a Barometer.

THE *Illustrirte Garten-Zeitung* says it is the easiest thing in the world to foretell the weather by observing the common American pine (*Pinus Strobus*). If we expect rain or snow within a reasonably short space of time the branches of the last two season's growth will be pendulous. If such weather be a long way off, the branches will be raised rather than drooping.

A Short Output.

The *Lumberman's Gazette* of Bay City, Michigan, says:—By the middle of July last year over 40 per cent. of the mill cut of the Saginaw river of 1882 had been put on to the docks, but an immense reduction from the figures of 1882 is shown this year. First a very late opening interfered, and then the mills have been subjected to continual and annoying delays from high water and lack of logs, and the present prospects are not of the most flattering description for anything like last year's output. Long ago we predicted the lumber cut on the river would be 250,000,000 short, and we see no reason for a change of opinion, while the *Call*, of this city estimates the shortage at 300.000,000 feet. It is safe to assert, however, that the output of lumfor 1883 will not much exceed 75 per cent. of that of 1882.

Immunity from Fire.

The freedom of the yellow pine from the blighting effects of forest fires is a problem which, as yet, has not been satisfactorily solved, and it is one which has excited the admiration of many old Michigan and Pennsylvania lumbermen. Many reasons have been given, but the latest is from a lumberman who hails from Pennsylvania. He has watched the progress and effect of many fires, and some especially hot ones, upon individual trees, around which dead limbs were piled ten and twelve feet high. The tree would be burned black, but no injurious effect was observable afterwards, as the tree grew steadily on. He has about reached the conclusion that the heat from the fires draws a superabundance of sap to the heated portions of the tree, and thus prevents the wood from burning.—*American Lumberman.*

THE *Timber Trades Journal* of July 7th, says:—During the past three months the consumption of Quebec pine logs (waney boardwood, yellow pine, and red pine) amounts to about 9,000 logs; and of oak, elm, and birch, 3,200 logs. Of pitch pine logs, hewn and sawn, the quarter's consumption has been about 15,000 logs.

IT is now in season to warn our readers against the sudden attacks of Cholera, Cramp Colic, and the various Bowel Complaints incident to the season of ripe fruit, vegetables, etc. Dr. Fowler's Extract of Wild Strawberry is the grand specific for those troubles.

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont. AUG. 1, 1883.

WE would call the attention of our readers to the important auction sale of valuable timber limits to be held at Ottawa on August 28th, the particulars of which may be found in our advertising columns.

AN estimate has been made of the timber lately levelled by the tornado near Hubbard lake, Mich., by which it appears that Fletcher, Peck & Co. have about 4,000,000 feet flat, and Jackson's fallen timber amounts to 8,000,000.

A GREAT deal of rafting is being done on the Ottawa just now. Timber cribs are being formed into rafts at the foot of Government Hill, and large rafts are being made up, near Gatineau Point, of small cribs of railway ties from up the Gatineau river.

THE *Northwestern Lumberman* says:—The Canadian propeller Bruno lately loaded at Ashland, Wis., and cleared for Quebec, with a full cargo of first-class, gang-sawed deals, manufactured by the Superior Lumber Company. It was the first of four cargoes sold by that Company to Quebec parties.

MR. MCALLISTER'S drive of 40,000 logs, after all, has stuck in Snake River. The water was high enough but the rank weeds that grow to such an extraordinary height in the water there prevents them being further driven this year. Many of our citizens will be sorry to hear of the mishap, after the efforts of Mr. McAllister and his men to get them through.—*Standard.*

THERE are about ten thousand pieces of what is known as "piling" on the river above the falls, says the St. John *Globe*, intended for the American market, chiefly New York. The usual freight on these articles would be about fifteen thousand dollars, almost as much, if not quite as much, as the first value of the tree. Instead of sending them to the States by schooner, the owner intends to do them up in large cribs, which will be six or seven feet below the surface of the water, and three or four above, and thus tow them to their destination. This, it is believed, will cost much less than the usual mode of conveyance.

AN Ottawa despatch of July 23rd says that an extensive jam of logs on the Gatineau broke this morning in the vicinity of Gilmour & Co.'s mills, carrying away a portion of the boom and allowing thousands of logs to float down the stream. The damage done will reach several thousand dollars.

THE St. John, N. B. *Telegraph* says that today very little pine, spruce, hemlock, or cedar is permitted to go to waste. What used to be waste is now made up into casks, barrels, and kegs, for lime, sugar, and nail manufacturers, and the rough bark of some of the lumber is eagerly sought for by paper-makers. Our contemporary adds:—"If a 'penny saved is twopence earned,' our mill men may be congratulated upon the opportunities made available by discovery and necessity during the past few years."

THE Ottawa *Free Press* says:—The probabilities are that the output this season of the Ottawa and Hull lumber mills will be far in excess of that of any former year. By the numerous improvements and additions the capacity of the mills has been increased fully fifty per cent. and the facilities for removing lumber have been greatly improved. Though considerable quantities are being shipped away, the piles are rapidly increasing and piling ground is at a premium.

A Winnipegger recently returned from the extreme end of the C. P. R. track, has brought from the Belly River a specimen of lignite coal of bright, clear character, burning excellently and giving out strong heat. He has also specimens of petrified pine showing perfect formation of the ancient tree, and proving the existence in the country at an earlier period, says the Manitoba *Free Press*, of trees of mammoth growth. Clusters of quartz, showing indications of gold, clung to the specimen.

THE Fredericton, N. B., *Capital* of July 10th, says:—The work of rafting logs at the Douglas, Mitchell and Glazier booms is now rapidly pushed forward by strong crews, numbering in all about three hundred and fifty men. With this force and favorable weather, the average number of joints put up per day ranges from 400 to 450, or, in superficial feet amounting to 1,250,000 per day. Rafting at the Glasier boom only commenced last week, previous to which there has been rafted at the Douglas and Mitchell booms 30,000,000 feet this season in 10,000 joints. All the lumber to come down the river this summer is now on the booms, which are estimated to contain, at present, about 90,000,000 feet. This amount, with the present crews and favorable weather, can be put out in about 80 days. The company expect to have all the logs rafted by the middle of October at the farthest.

THE FORESTS OF ONTARIO.

THE report compiled by Mr. R. W. Phipps on the necessity of preserving and replanting our forests, will, we hope, call general attention to a matter of which we have constantly urged the importance, namely, the wasteful system adopted by Ontario, in common with the other Provinces of Canada, in regard to the forest wealth of the country.

The constant and rapid denudation of our forests and woodlands has already done an amount of damage which will be difficult to remedy, and which, if continued much longer, would be irreparable, except at an enormous expense. Already the removal of shelter has affected the climate and deprived our arable land of protection, till smaller crops are obtained from the cultivated lands than would not be the case if a less area were under the plough and a portion of it left wooded. Our forests have been trenched upon until already in many large districts our lumbermen are unable to find timber of the quality formerly obtained, and no distant period must see our Province importing instead of exporting. The capital of the Province is being seriously impaired, for forests, which ought to be a perpetual source of income, are being extirpated once for all, in many cases leaving the cleared land almost valueless.

Under our present system the settlers and lumbermen are invited and indeed almost compelled to join in a race for the destruction of our forests, resulting in the least possible benefit either to the public or to themselves, and causing between them a feeling of antagonism which is to be lamented.

The principal remedy for this improvident system which has been hitherto in vogue in Canada, without distinction of Province or of party, is the setting apart of public forests to be reseved in perpetuity. In Ontario the necessity for this measure is especially pressing. There should without delay be established a separate Department, or at least a Bureau of Woods and Forests, under a a competent head and with an efficient staff.

The first and most pressingly important duty of this Department would be to examine and map out the Crown Lands, the public domain of the Province, so as to discriminate between agricultural lands to be opened for settlement, and forest lands where the existing timber, the nature of the soil, or other circumstances, render advisable the reservation of a certain area as a public forest. Of course these recommendations should be subject to proper checks, and the final reservation of forests shoutd be a matter for cabinet action and ministerial responsibility. Hereafter, too, the boundaries of the forest areas might be modified, enlarged, or restricted, as circumstances might demand. When such a separation of our public lands is effected, settlement should not be allowed in the forests, and the operations of the lumbermen should be at least restricted in the lands to be devoted to agriculture. In this manner much of the present friction, antagonism and waste would be avoided.

The forests, when once established, should be treated as such public property is managed in Germany, which is the head quarters of the science of forestry, in the British Isles, in other European countries, and even in India and Australasia, which are more provident in this respect than we have been. There an annual crop is obtained from the forest as from the farm, and this important portion of the public capital is not exhausted at one fell swoop.

Though it would have been easier to have adopted these measures at an earlier period, it is not yet too late. We may instance the height of land running across Ontario northwesterly from the Thousand Islands to the Georgian Bay and Lake Superior. Much of this is far better adapted for forest culture than for agriculture. Much of it is still covered with valuable timber, though it is fast disappearing. There are large tracts of it where little of the land has been alienated to settlers, and some of it is still in the hands of the Crown. A great portion of it is under license to the lumbermen, but it should not be impossible to devise some plan by which their vested interests may be protected, while the value of the public domain is preserved. With settlers excluded from the forests, one great reason of the haste of the lumbermen to strip their limits of the timber would disappear. By limiting the cut to mature trees, by sparing those still immature, by providing for the removal of fire-spreading debris, and by encouraging the young growth, or replanting where necessary, a perpetual supply of valuable timber might be maintained. This is done in other countries very similarly situated, and we see no reason why it cannot be done in Canada, with great advantage both to public and private interests.

To establish such a forest staff as would be necessary to carry out this plan, recourse might in the first place be necessary to an experienced forestry officer from Great Britain, or even from Germany, where the science has been practised and studied for centuries. Soon we should be able to produce our own qualified forestry officers, and pending other arrangements, the Agricultural College might be utilized for such training, its head officer having already displayed much interest in forestry.

If any good is to be done, early action is of the utmost importance, and we hope that the next session of our local legislature will see steps taken in this direction.

THE LATE DR. JOHN A. WARDER.

WE regret to have to record the death of Dr. John A. Warder, whose zealous efforts to promote forestry are well known to our readers. He was a valued contributor to the columns of the CANADA LUMBERMAN, and we will miss his genial correspondence, advice and even criticism. The *Northwestern Lumberman* says of him:

"Dr. John A. Warder, of North Bend, Ohio, who died recently, was an enthusiast in everything that pertained to forestry. He labored earnestly and vigorously for forest protection and extension, and was always a leader in the meetings called to consider these questions. The last time he visited the *Lumberman* he spoke in detail of what he hoped to accomplish, but it was plain to an observer that owing to his age and state of health his aspirations would never be realized. He has written much on subjects pertaining to forestry, and while practical men might easily find an opportunity to differ with him on some points, no one ever questioned his earnestness, or that his intentions were of the very best."

Does Lightning Strike the Pine?

It has been often said by the so-called wise old "Say So's" in this locality that the lightning never strikes the pine tree; but the fact was very conclusively demonstrated to the contrary to-day at this place—Mr. James Fenwick's. Mr. Fenwick's place is the one adjoining that of Admiral Lee. Just after 1 o'clock p.m. the storm passed directly over Mr. F.'s house from the northeast, and soon after a vivid flash of lightning came, which struck two pine trees only ten or twenty feet from his house. A part of the electricity passed down the trees into the ground, tearing off great strips of bark and cutting a groove into the trees for some distance just before it passed off into the ground. The rest of it followed a wire clothes-line attached to one of the trees to the other end of the wire and then passed down a cedar post to which the wire was attached into the ground. It split the post the whole length and broke off large pieces from it. It was a very narrow escape for the house, for if the cloud had discharged a moment sooner it would certainly have hit the house, and perhaps have done a great deal of damage. There are a quite a number of Washington people spending the summer here and all who were at the house were very much alarmed, and also the animals. The horses in the stable never tried to break away and run, the flash was so vivid and the report so loud.—*Sligo (Md) Letter to Washington Star.*

Damage by Logs.

DETROIT, July 27.—Yesterday morning three piers of the Detroit, Grand Haven, and Milwaukee bridge went down before the pressure of one hundred million feet of logs, and the logs passed on and tore out the Grand Rapids and Indiana and Chicago and West Michigan railroad bridges. The logs are now at rest against the Lake Shore and Michigan Southern, which will probably give way. Seventy million feet of the logs are owned in Grand Haven, and 30 million in Grand Rapids. The damage to the Detroit and Milwaukee bridge will amount to $20,000; Grand Rapids and Indiana destroyed, cost $20,000; Chicago and West Michigan damaged, $30,000; Sixth and Seventh wards flooded, creating damage estimated at $20,000; different factories damaged, $15,000, and those on the canal will shut down for three weeks. The city bridges all stand, but some are shattered.

THE Indianapolis, Ind., Wooden Dish Company has perfected a machine, which takes the veneer from the mill, cuts out the blank, shapes and scores it, folds it up, makes, drives and clinches the wire staples, and throws the dishes off complete, at the rate of one a second. The company's work's, burned last March, have been rebuilt, and $12,000 worth of new machinery has been purchased. The works will start up August 15, and have a capacity of 200,000 per day.

ROCK ELM WANTED.

A Few Car Loads of good ROCK ELM, cut into 1½, 2, 2½ and 3 inches thick, 12ft. length prefered.

DUFRESNE & JODOIN,
Lumber Dealers,
6t12 496, St. Joseph Street, Montreal.

SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞Canada Pacific Railway now running through part of the property.

For full particulars address :—

WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

Notice to Contractors.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Post Office, Barrie, Ont," will be received at this office until TUESDAY, the 7th of AUGUST next, inclusive, for the erection of

POST OFFICE
—AT—
BARRIE, ONT.

Plans and specifications can be seen at the Department of Public Works, Ottawa, and at the office of Messrs. Kennedy, McVittie & Holland, Architects, Barrie, on and after TUESDAY, the 24th July next.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honorable the Minister of Public Works, *equal to five per cent.* of the amount of the tender, which will be forfeited if the party tendering decline to enter into contract when called on to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The department will not be bound to accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.

Department of Public Works, Ottawa, July, 1883. 1L15

Extensive Sale
OF VALUABLE
TIMBER LIMITS

For the purpose of determining the partnership existing between the undersigned, they will offer for sale by PUBLIC AUCTION at the RUSSELL HOUSE, in the CITY OF OTTAWA, on WEDNESDAY, the 12th day of SEPTEMBER next, at TWO o'clock in the afternoon (unless sooner disposed of by private sale), the following Valuable Timber Limits, or Licenses to cut Timber, in the Provinces of Quebec and Ontario :—

PARCEL I,
Province of Quebec.

License						
No. 85 of 1881-82,	River Maganicippi,			Area	25	sq. miles.
" 86	do	do	do	do	50	do
" 87	do	do	do	do	50	do
" 88	do	do	do	do	50	do
" 89	do	do	do	do	50	do
" 90	do	do	do	do	30	do
" 91	do	do	do	do	17½	do
" 92	do	do	do	do	26	do
" 93	do	Ottawa&Maganicippi,		do	50	do

Total area ....348½ sq. miles.

PARCEL II,
Province of Ontario.

No. 129 of 1882-83,	River Ottawa,		Area	22½	sq. miles
" 130	do	do	do	57	do

Total area ....79½ sq. miles.

☞Term s and conditions made known at time of sale Further information may be obtained on application to JAMES ADAM, ESQ., Manager St. Lawrence Docks, Quebec, JOHN POUPORE, ESQ., Crown Timber Office, Ottawa, JOHN WALKER, ESQ., Manager Quebec Bank, Toronto, or at the office of the undersigned in Pembroke.

2L15 A. & P. WHITE.

WATER POWER
TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND
1d86 LAKEFIELD, ONT. w15L9

A RARE CHANCE!

Valuable Steam Saw-Mill
FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings through piling Grounds connected with main line of Canada Pacific Railway The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waba Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, Seigneurs Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

J. T. LAMBERT,
6L11 Lumber Broker, 110 Wellington St., Ottawa.

AUCTION SALE
—OF—
VALUABLE
Timber Limits

I will offer for sale by Public Auction, on account of whom it may concern, at the Grand Union Hotel, in the CITY OF OTTAWA, on TUESDAY, the 28th day of AUGUST next, at the hour of 2,30 o'clock in the afternoon, Timber Limits as follows :—

PARCEL No. 1.

License—					
No. 389	Kippewa,	Season	1882-83,	50	sq. miles.
390	do	do	do	40	do
391	do	do	do	20	do
398	do	do	do	6	do
399	do	do	do	50	do
397	Temiscamingue,		do	50	do
355	do	do	do	6	do
406,	River Ottawa,		do	25	do
386	do	do	do	67¾	do
400,	Coulonge & B River		do	7	do

PARCEL No. 2.

401,	North of River Coulonge			30	do
402	do	do	do	30	do
403	do	do	do	30	do
404	do	do	do	30	do
405	do	do	do	30	do

PARCEL No. 3.

387,	River Ottawa,		do	17	do
388	do	do	do	43	do
392,	River Coulonge,		do	50	do
392	do	do	do	50	do

PARCEL No. 4.

Upper					Miles.
Ottawa,	License	1873-4,	No 431,	containing	58¾
do	do	do	532	do	49½
do	do	do	533	do	52
do	do	do	534	do	47¾
do	do	do	535	do	32½
do	do	do	537	do	46¼
do	do	do	537	do	50¾
do	do	do	538	do	47¼

PARCEL No. 5.

do	do	do	507	do	50
do	do	do	508	do	47¼
do	do	do	509	do	40
do	do	do	510	do	28
do	do	do	511	do	26

Also half interest in Licenses Nos. 343 and 344, season 1882-83, 87 square miles.

Timber cut on Kippewa Limits was sold in 1880, 30c ; 1881, 32c , and 1882, 32c. There is also a farm in connection with the limits which will be sold with a quantity of Clear Mess Pork, Flour, Oats, Beans, Hay, Horses and other rigging requisite for shantying.

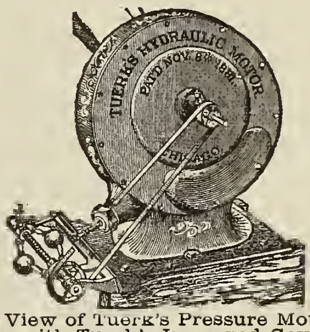
TERMS—Cash, or one-third cash, one-third in 6 months and one-third in 12 months, with interest at 6 per cent., approved notes. For further particulars apply to the Crown Timber Agent, Ottawa, or to.

R. C. W. MacCUAIG,
3L14 Auctioneer.

F. E. DIXON & CO.
MANUFACTURERS OF
STAR RIVET
LEATHER BELTING
70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

TUERK'S
WATER MOTOR.
Patented November 8th, 1881.



View of Tuerk's Pressure Motor, with Tuerk's Improved Governor Attachment.

For running Sewing Machines for families or for manufactories; also, for running Dental Lathes and Engines, Telephone Generators, Coffee Mills and Roasters, House and Church Organs; also for running one Printing Press or six, at the same time. Paper Cutters, Sausage Machines of any make or size; GRAIN, FREIGHT OR PASSENGER ELEVATORS, Straw Cutters, and all kinds of Machinery by Water Power.

HYDRANT PRESSURE.

☞Cheaper, Quicker and Safer than Steam.

Over Fifty Motors of other makes have been taken out and replaced with the TUERK MOTOR; among the list are the Backus, the Sabin, the Little Giant, the Hayward, Clark's Piston Engine, and others.

Names of a few who have taken out Backus Motors and put in the Tuerk Motor in their place:

C. W. Meikel, Indianapolis, Ind.
Columbus Telephone Co., Columbus, Ohio.
James Egan, Chicago, Ill.
H. C. Hawkins, Cleveland, Ohio.
Printing Office, Hannibal, Mo.
A. Solmens, Hat Manufactory, So. Norwalk, Ct.
Lake Shore & Mich. So. R.R. Shops, Elyria, O.
Index Printing Office, Evanston, Ill.
Republican, Johnstown, N. Y.
Tribune, Salt Lake, Utah.
Alton Printing Co., Alton, Ill.
A. F. Worthington & Co., Cincinnati, Ohio.
Lemon & Co., Waverly, N. Y.
Braun & Jones, Cedar Rapids, Iowa.
Gates, Douglas & Co., Cedar Rapids, Iowa.
Village of Rutland, Rutland, Vt.
W. L. Randall, Chicago, Ill.
A. J. Stoll, Sandusky, Ohio.
Killits & Wayland, Chillicothe, Ohio.
S. A. Morrow, Springfield, Ohio.
R. Putnam, Chillicothe, Ohio.
N. Shelton, Omaha, Neb.
H. J. Lewelling, St. Helena, Cal., and others.

☞Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

Send for Catalogue, and state what you want to un,—give fu l part culars and Water Pressure per square inch.

TUERK BROS. & JOHNSTON,
86 and 88 Market Street, Chicago, Ill.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w46d112L22

PLANTING IN WASTE PLACES.

The following paper by Bernhard E. Fernow, of Slatington, Pa., is taken from the *American Journal of Forestry* :—

Most of the methods recommended and described in American papers for planting forests, presuppose that the ground to be planted is arable, or at least workable with the spade. This may be all right for the Prairie States ; yet there are probably on every farm in the mountainous regions more waste places than anywhere else, that will never pay to get the stones out—that wont't grow any grass of value, and that defy all cultivation. There are others which are too wet, and on account of their nature drainage for agricultural use is impossible and unprofitable ; others again, which on their dry, shifting sand will not bear any crop.

These are the very places to which, in time, the forest in every well settled country will be more or less confined, the better portions needed for farming purposes; and fortunately enough, not only can such places be made to bear forests, but, being so used, they are improved, and often after some time, gain in value, even for agricultural crops.

To find out cheap methods for covering such places with a tree growth is therefore a task not to be neglected.

With this object in view, I give the following description of a very valuable instrument, to be used in places where the spade is not easily applied, or where it is an object to quickly cover a large area. It is especially applicable for one and two year-old-plants (in most cases the best age for planting), and is most extensively used in Germany, for the inforestation of the large heaths, in the sandy plains, and in mountain lands. Millions of young pines are planted every year in this way.

This instrument consists of two parts: a shoe made of iron with one rounded and one flat side, tapering towards the end, in shape like a half cone, so that two of these shoes placed together, with flat sides, would represent a perfect cone, or nearly so; in the centre (somewhat nearer the flat side) of the base is a threaded hole to receive the handlo, which consists of a five-eighths inch rod, three and one-half feet long, with a squarely set wood haft. The shoo may be made eight inches long and three and one-half inch at the base, and to make it somewhat lighter it may be cast with a square oblong hole half way through the back.

The *modus operandi* is to thrust this iron dibble into the ground where the plant is to stand, somewhat open up the hole thus made, by moving the dibble back and forth ; withdraw, put the plant into the hole to the straight side, thrust the dipple again into the ground one to one and a half inch back of the first hole, somewhat slantingly towards the bottom of this, press forward to fasten the plant in its stand ; then by a few irregular thrusts close the last made hole and proceed to the next place.

The original instrument had a short, rounded handle, and the whole operation was done by one man, who could dispose of 1,200 to 1,700 plants, according to locality.

Where the planting is done on a large scale, the work progresses most expeditiously, if an active boy, or still better as my experience goes, a woman, serve two planters with the plants. The planters manipulate the dibble, whilst the boy with the plants, in a mixture of loam and water (to keep the roots not only moist, but also heavy for better dropping into the plant hole), holds the plant in the hole, first serving the one and then the other. With this force, if accustomed to the work, 5,000 plants may be disposed of per day, or as for such planting of yearlings, at least 7,000 plants should be set out per acre. The planting will cost from $4.50 to $5.50 per acre.

FOREST PRODUCTS AT CHICAGO.

The Chicago *Times* says that a comparison of the total shipments of lumber for this season shows a decline, as contrasted with the number of feet received during the same period of last year, of over 200,000,000 feet. The falling off is said to be due to a disagreement between shippers and dealers with regard to prices, and there is a general belief that while the shipments have fallen off the production has been about the same, and that great piles of it are held at the saw mills to await a favorable market. In spite of the decline in the amount of shipments, the prices remain about the same as last year, the reason being, as given by the secretary of the exchange, that dealers think the production has been about the same as last year, and, farther, that they could not afford to compete with Mississippi river prices if high rates were maintained. The effect of the decline in lumber shipment has been to force a good many vessels in carrying other freights, and there has been an increase in the receipts of slabs, bark, cedar posts, railway ties, and telegraph poles. The lumber reciepts of last year up to the 7th of July, were 806,117,000 feet, against 599,869,000 during the same time this year, leaving a difference of 209,248,000 feet in favor of the season of 1882.

The following statement shows the receipts of forest products at this port as reported at the custom house from January 1st to July 1st, 1883 :

Lumber feet	542,797,000
Shingles	369,105,000
Lath pieces	15,745,000
Wood, cords	9,741
Cedar posts	1,432,459
Cedar railway ties	608,758
Cedar telegraph poles	78,481
Bark, cords	3,177
Slabs, cords	9,270
Spiles	120
Lumber (hardwood), feet	740,000

HOW LINE SHAFTING SHOULD BE CARED FOR, AND THE LOAD.

In all buildings of large dimensions the foundations are more or less defective, to the extent of settling down and permitting a very considerable variation, from time to time, from a true level. This is not less the case in mills of all kinds, whether large or small, than in government and other large buildings, the bases for which have been put in without regard to cost, or any other economic consideration. So universally is this the case, that it may almost be considered a general rule from which there is very little deviation.

In running all power machinery, close attention to its condition is imperatively demanded ; at least once a month, the foreman, or some other competent expert, should carefully inspect all the shaftings, attentively noting its condition, whether truly level or more or less out of line, and also the journals and their boxes, examining the babbitt metal in them, and if there is undue wear or cutting, examine into the cause, and proceed without any delay whatever to remedy any defects that may be discovered.

The shafting, journals, hangers and pulleys are all necessary intermediates between the steam or water power and the productive machinery. On their good condition depends all the prosperity of establishments driven either by steam or water, and the skill, care and attention that should be exercised in properly placing them and caring for them afterwards ought to be as great as in the construction of the building itself, or the selection of the tools and machinery that make the product. It is imperatively necessary that the shafting should not only be strong euough to sustain the weight of the pulleys, but to withstand the strain of belts without springing, as well as to hold up the weight between supports placed at considerable distances, on a main line 10 or 12 feet apart. If the shaft does spring at all, it is instantly out of line, the boxes soon wear out, and the iron journals heat and cut, and while the friction is excessive, it is also a wasteful destroyer and absorber of valuable money-costing power, all of which may be needed to operate the machinery of the coucern, eveu when none is wasted. The adjustment of bearings, etc., of shaftings, is a matter of much importance. If useless bearings are placed, it is at the expense of much additional power wasted in friction. The matter of size of shafting and distance between bearings are all parts of a great whole, that has never received the attention its importance deserves. The object of the millwright is of course to have his shafting heavy and steady enough to withstand all the strain and pull to which it may be subjected, and have plenty of strength left over and beyond that limit. But all this weight, whether needed or useless, must be kept in motion by the motive power, at as great an expense in proportion to the force exerted as the working machines themselves.

The lighter the shafting can be made and used, to obtain all the torsional or twisting non-bending strength needed, of course the easier it is to be moved. This, of course, includes all the attachment of pulleys, hangers, etc. Much progress has been made in this direction within the past twenty five years, but much yet remains to be accomplished in this direction. Cast-iron pulleys are not only much lighter than in former years, but improved processes of swaging have produced a wrought-iron article that leaves but little to be desired in this way. Both wooden and paper pulleys are also made now, of greatly improved construction.—*Milling World.*

TAPER GROUND SAWS.—THIN SAWS.

The *Wood-Worker* contains the following contribution by M. Covel :—

The majority of mill men and filers know but little of the changes that have been made in saws in the last twenty-five years. When the circular saw was first introduced no one knew anything about hammering them open ; it was thought the stiffer the plate the better. Then they were all made straight gauge. Following came the taper ground saw, which has been in use twenty years, and is still in use by the majority of mills. Now I would like for some one to bring proof that it is better to have the plate thicker in the centre than elsewhere, and convince me of any benefit to be derived therefrom. It would be much easier to convince me that I am wrong than to convince the great number of mill men who are using taper saws that they are wrong. Since the motion of circular saws has been increased, the extra steel in the centre is a detriment instead of a benefit. It is well known that a saw will not run well when it is stiff in the centre. I would by all means prefer it thinner there than otherwise. My reasons are theso: First, a straight saw will run with less set ; second, it requires less hammering to put the saw in good condition for running. The less set, the less power it takes to drive it, the lighter it cuts, and the less liable it is to buckle and dodge. Everything that will lighten the running of a saw should bo sought for by all interested in its use. For a long time there were but few changes made, but within the last five years there has been much discovered that nearly doubles its capacity. And other thing, when better understood, will add to this efficiency twenty-five per cent. more than is now realized by the majority of mills.

Many mills are now running thinner and straight gauge saws. Some are making a success of straight 8-gauge 60-inch, and some do well with 10-gauge 72-inch. I have faith and confidence that five years hence 10-gauge saws will be run with as much success as 8-gauge saws now are.

This using of thin saws is a subject of interest to all persons engaged in the mannfacture of lumber. Timber is becoming too scarce and expensive to waste 25 per cent. of it in sawdust. All that can be saved by the use of thin saws over thick ones is clear gain. Many try to run thin saws, but fail for lack of knowledge how to run them and how they should be made. There are several causes why mill men are not running saws three or four gauges thinner than those now in use. Thin saws can be run if they are properly handled. One prominent cause of their failure to run satisfactorily is in not having the proper number of teeth. Another cause is lack of skill to dress the teeth. It is not all in filing ; much depends upon the hammering of the saw. I have seen 10-gauge 72-inch saws run in hardwood and carry as much feed as was carried ten years ago in soft timber by 8-gauge, and with good results.

A BONANZA IN LOGS.

L. Hirsh, a New York importer of fancy woods, has recently returned from a trip to Europe in search of desirable foreign veneer material. He found a large stock of old logs in the Liverpool, Eng., market, many of which have been stored from two to 15 years, being in consequence regarded worthless by the expert importer. The London market was destitute, and has almost ceased to be a centre for the shipment of foreign walnut and veneers to the American markets. At Paris the Germans had made a raid on all the available veneers, and in March the market was absolutely bare, and what came in April was seized by dealers with hungry avidity. In Marseilles there was a surplus of inferior burls, and only a few choice lots, which were held at very high prices. Some of these it required considerable bantering to secure at a reasonable figure. By over-hearing a conversation, while making a railway trip from London to Paris, *via* New Haven and Dieppe the importer was put on the track of some desirable trees in the south of France. They were reached by going from Bordeaux to Bayonne, and thence to the little village of Perigeaux, in a wild, mountainous forest, a spur of the Pyrenees, far from railroads or other avenues of transportation. Lying within a radius of seven or eight miles from the town were the trees. Sixteen huge logs were bargained for. Fifteen of them were shipped away with considerable difficulty, but the largest and biggest trunk, in the language of the importer, "was a terror." When felled, it measured from the butt to the first limb 12 feet in length, and seven feet in diameter, with a wart or burl on it weighing about a ton. The whole log weighed seven tons. It was taken to the nearest railway station by 22 horses, arranged in tandem teams, and 40 men, and shipped to Paris. Eighteen large Normandy horses were used in transferring the log from one depot to another at Paris, the procession attracting crowds and calling forth copious newspaper mention. The manager of the Jardin des Plantes, or Bureau of Agriculture, viewed the log and visited its owner, and wanted it placed on exhibition as a great curiosity. He took the owner's refusal sorrowfully, and regretted that the New Yorker was not a Frenchman so that he might receive the red ribbon of the Legion d' Honeur, to which he would have been entitled for the discovery of the giant log. The latter was transported to Havre, and at last accounts no steamer that would take it to America had been found. The importer pronounces the log a great beauty as well as a monster, and says it shows fine figure and color at both ends. It is estimated to cut about 50,000 feet of veneer.—*Northwestern Lumberman.*

A Tow.

The largest tow of lumber barges ever seen on Lake Champlain recently cleared from Rouse's Point for Whitehall, pulled by the steamer R. H. Cook. The boats, (called canal boats on Lake Champlain), numbered 62. At Gravelly point they met the steamers Tisdale and Grand Isle going north with a tow of 40 boats, and the scene looked decidedly like business. At Plattsburg the R. H. Cook took on 24 boats more, making 86 in the tow. Such a string as that would make even the Marinette Barge Line Towing Company protrude its eyes with wonder. Yet one of the big barges on Lake Michigan would probably swallow a whole schools of Lake Champlain pollywogs.—*Northwestern Lumberman.*

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it. mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

A Valuable Discovery.—One of the most valuable discoveries in the medical science, for the benefit of mankind, was made when Burdock Blood Bitters were invented. This medicine positively cures all diseases of the Liver, Kidneys, Stomach, Skin and Blood. 25,000 bottles have been sold during the last three months.

Chips.

MORE than 3,000,000 trees were planted in Great Britain during the season of 1882.

A MANISTIQUE, Mich., paper says that the loading of lumber barges does not seem to make much impression on the piles at the mills there, and stock is fast accumulating.

THE pulp mill of Messrs. Angus & Buck, at Angus, on the St. Francis river, 18 miles from Sherbrooke, is making quite a village of what was hitherto a wilderness.

LATELY there has been a jam in the Muskegon, reaching from Hersey, Mich., towards Big Rapids, 20 miles by the river. It was represented to contain $1,000,000 worth of pine.

THE Port Arthur despatch of the Winnipeg *Times* under date July 9th, says :—The schooner Woodruff arrived at seven a. m. with three hundred and fifty thousand feet of lumber for W. Latch, Winnipeg.

THE Emerson *International* of July 11th says :—A drive of ten million feet of logs is now on its way down the river from Red Lake. It will not reach this point for a couple of weeks or more.

DULUTH and its immediate vicinity has 13 saw mills, with a daily capacity of 1,165,000 feet of lumber. This year the expected cut will be, according to estimate, 142,000,000 feet as compared to 84,218,000 last year.

THE Emerson *International* of July 11, says : Something like 5,000,000 feet of lumber is being shipped from the American markets for the C. P. R. line west. All this lumber will be transshipped here, which will give employment to a considerable staff of men for some time.

THE department of the interior has caused to be posted throughout the Puget Sound country a general warning against starting fires in timber on public lands, under pain of prosecution. The Northern Pacific road has made the same announcement regarding its lands.

The borers in the maples having been attended to, a new pest has appeared in certain parts of the country. The balsam trees are now attacked, the trunks being infested with millions of small insects, which threaten to destroy the trees unless attended to.

ABOUT the last concern on earth which it would seem possible to run with prison labor is a saw mill, and yet Texas has tried it. Recently a saw mill near Hunstville in that state, while being conducted on this method, was blown to atoms by a boiler explosion.

THE Winnipeg *Times* of July 7th, says :—A second raft of 400,000 feet of timber has arrived at Selkirk for the North-West Lumbering Company. It was towed by the Colville, and the rough weather experienced made it extremely difficult to get the raft safely into port.

THE Tittabawassee boom company was compelled to suspend operations again recently, owing to high water, which rendered work impracticable if not impossible. How long this condition of things will last it is impossible to predict, but officers of the company say that the probability is that the suspension will last ten days, or two weeks.

IN Crawford county, Kansas, there are two plantations of 500 acres each. Catalpa is the favorite tree, and is being cultivated for railroad ties by the Fort Scott & Gulf Railway company ; a block of 100,000 seedlings planted four years ago range from 10 to 15 feet in height ; in circumference the trees range from 8 to 11 inches.

THE Cobourg *Sentinel-Star* speaking of the returns of that custom house for the past fiscal year says :—Amongst the free goods imported—raw material for our manufacturers—we find the following figures :

Walnut lumber	$3,126
Pitch Pine	7,835
Mahogany	8,152

A REPORT comes from Alpena that 7,000,000 feet of pine was blown down by a wind storm near Hubbard Lake. At the rate at which the pine stumpage is held now, this would involve a loss of over $30,000. The destruction in the forests is said to have been extensive. Roads are also reported to be rendered impassable on account of being filled with fallen trees. In some places the trees are piled seven deep on the road.

CLOTHES pins are made of white birch and beech. The logs are sawed by three operations into blocks five inches long and three-quarters of an inch square. In this shape they are fed out of troughs into automatic laths, each of which turns out eighty rounded pins per minute. With equal rapidity the knives of a slotting machine, set to work like a circular saw, bite out the sloping slot of each pin.

THE Indianapolis Wooden-Dish Company has just perfected a new machine for making wooden dishes. This machine takes the veneer from the veneer mill, cuts out the blank, shapes and scores it, folds it up, and takes the wire from the spools forming the staple, drives the staple at each end of the dish, drives and clinches it, and throws the dishes off from the machine complete, at the rate of sixty per minute.

THE *Lumberman's Gazette* of July 18, says :—A river jammed full of logs for forty miles would doubtless be a matter of astonishment and great interest to the millions of people who witness the daily consumption of lumber in their immediate vicinity, but who have no adequate conception of its method of production, and yet it is no common sight in Michigan ; and the river from Alpena to Hillman is in just such a condition at present. Before snow flies, however, this floating wealth will have been submitted to the dissecting and separating processs of the circular, gang and edger, and probably be undergoing the distributing process which precedes consumption.

THREE millions and a half feet of yellow pine lumber were recently sold in New York within a week, on three contracts. A half million feet were taken for a building to be erected by the Trinity church estate, at $25 per thousand delivered. The contractors for the new building to be erected on the site of Booth's theater took an equal amount at the same figures. The third contract for two and a half million feet was made by the Franco-American Trading Company, to be used in the erection of 112 buildings on the isthmus af Panama for the great Lesseps Canal company. At this rate of consumption southern pine mills will be under no necessity of shutting down, trade will remain active, and good prices be assured.

MR. SAUNDERS, of London, the well known entomologist, draws attention to the rapid increase of an insect injurious to maple trees. They prefer the soft or red maple, laying their eggs on the bark. The larvæ hatched out in a few days, penetrates the bark and feeds upon the sapwood, very much to the injury of the tree. Mr. Saunders recommends coating the trees immediately with a mixture of soap and a solution of washing soda or lye, made about the consistence of ordinary paint, and applying it with a brush from the base of the trees upwards to the first branches. The soap solution may be made either from soft or hard soap—if the latter it should be warmed so as to melt it, when it will be the more easily mixed with the solution of washing soda or lye. To prevent increase, the remedy should be applied at once.

THE Sherbrooke *Examiner* says :—Angus, recently a wilderness, is being made to blossom as a rose. Instead of what was a few months ago an almost unbroken forest, it is fast assuming the proportions of a thriving village. The place is named after the senior partner of the firm of Angus & Buck, who have built a splendid pulp mill here, besides saw mill, blacksmith shop, and nearly a dozen dwellings, having also cleared about 50 acres of land. The mill is built on the bank of the St. Francis river, 18 miles from Sherbrooke, on the line of the Quebec Central Railway, in the midst of a wooded country, the timber of which they are commencing to use up in the manufacture of wood pulp for making "news" and other papers. It is fitted up with the most modern machinery and employs some sixty hands which gives the place a decidedly busy appearance. The works are under the able superintendence of Mr. A. Ayerst, a gentleman from Ontario, while Mr. Buck, one of the firm, is usually to be found about the works looking after its interests. They are now turning out about 12 tons daily which finds a ready sale, and this production will soon be largely increased. They will very likely erect a mill for making paper themselves another year.

THOS. GRAHAM & Co.,

File Manufacturers

ETC.,

150 FRONT STREET EAST

TORONTO.

FILES FOR SALE. FILES RE-CUT.

THE Winnipeg *Commercial* says :—The lumber business is exceedingly quiet. Beyond the supplies required for a few considerable contracts now on hand, there is very little demand. The mills are getting to work, but there is no doubt that if the logs taken out last winter are cut into lumber the supply will be far in excess of the demand. Large quantities are being shipped into the country via Port Arthur, one firm alone bringing in 2,500,000 feet for its own use in building elevators. Had the local dealers shown a disposition to sell at reasonable figures this large order might as well have been supplied by mills in the North-West, and it would have made a big hole in the surplus stock which will be left on hand this fall.

A EAU CLAIRE dispatch says that the log drives in the Chippewa and Black River pineries have been virtually abandoned, and the crews have returned to seek their employment. The water in the main rivers has receded to such a low stage that to keep the crews at work would be a mere waste of time and useless expenditure of money. The drives on the Red Cedar have proved the most successful of any point in Northwestern Wisconsin, but have been the most expensive. Unless the usual September floods are heavy, there will be a shortage of logs for the Chippewa mills, and they will be compelled to shut down much earlier than was calculated. There is now at least 250,000,000 feet of last winter's cut hung up, which cannot possibly be removed till there comes a heavy natural raise.

THE Port Arthur *Herald* of July 11th says that WM. MARGACH, Government Timber Inspector, returned home this morning. He has been up in the neighborhood of Pine and Jarvis rivers, where he is having surveyed for the Ontario Government, two townships. The surveyor expected to be through in about six weeks, but it will take him considerably longer than that, owing to the obstacles in the way. He reports large forest fires raging in the neighborhood of Pine, Pigeon and Jarvis rivers, and the amount of good timber that has been destroyed is large. The fire seems to have come from the American side of the boundary line. This is not the first year that fires have been through the forest in this neighborhood, as the timber used to be very large, and it can be seen where the fires have gone through some years previously. The water in the different rivers is very low, and is much against the driving of logs.

Orange Boxes.

The only manufactory in the United States of orange and lemon boxes, is located on the borders of Lambert Lake, Maine, five miles east of Vanceboro, and turns out some 3,000 boxes daily, most of which are shipped to Italy and other foreign countries. Two million feet of hard wood timber are consumed yearly. The logs are taken into the mill from the lake, cut into necessary length (one inch thick) then stacked to season, and afterward placed together and secured for transportation. Arriving at its destination, each piece is sawed twice, making three pieces—two for ends and one for the middle of each box. For the top, bottom and sides of the box the logs are sawed 20 inches long, and then placed in the steam room, remaining three hours ; each piece is then placed under the peeler, whence it issues 3-16 of an inch thick. It is separated to the desired length, and then placed in seasoning or drying houses. The pieces thus prepared are shipped in bundles, being put together where they are used.

PACIFIC COAST CEDAR.

A correspondent of the *Northwestern Lumberman* says :—A well informed gentleman who has made a visit to Alaska, brings back a specimen of the yellow cedar growing there, with the following information. The forests of Southeastern Alaska are made up of three species of evergreens, all of good size, growing closely together and covering the slopes of the mountains up to the height of about 2,000 feet, the most important of which is the yellow cedar or cypress (*Cypressus Nathatensis*) which grows to a height of 150 feet, with a diameter of from three to five feet. The branches are feathery and drooping, like those of the California *libocedrus*, with more delicate plumes. The wood of this tree is the best the country affords, and one of the most valuable on the Pacific Coast. The specimen at hand shows it to be pale yellow, close grained, durable, and admissible of a good polish. To these qualities is added a pleasant fragrance, like that of sandalwood. Some of it has been sent to China and made up into fancy boxes, returning here as sandal-wood boxes. Some three or four ships have been built of yellow cedar, and a few thousand feet at a time have been sent to Portland and San Francisco. It deserves to be much better known, not only by shipbuilders, but carpenters and furniture makers. The Indians make paddles of it and weave matting and coarse cloth from the inner bark of the tree, which is quite durable and of a brown color. It is the favorite fire wood of the coast region. It burns freely and does not last long. The open hearth has to be screened with a wire netting to keep the cinders from reaching the floor. The timber is very durable, the largest of them lasting for centuries. There are large forests of this species reaching from Vancouver Islands to Sitka. Other species are mixed with it. The fragrance of this wood is retained indefinitely. —*Bing.*

TREES BY THE ROADSIDE.

There are miles of road that are dusty and hot in summer which might be greatly improved by the setting of trees upon each side. In narrow streets the trees had better be set inside the wall, but where the streets are wide and the sidewalk wide as well, then the trees may be set between the side walk and the street. They should not be set too near together, 40 to 50 feet is near enough when they get large. A good way is to set them every 25 feet, and when they get large enough to touch each other let every second tree be cut out, and that will leave room for the others to grow and spread. The best trees to set in streets are the American elm, sugar, scarlet, silver and Norway maples, American lime or bass. When there is little or no soil a large hole should be dug and loam filled in. Trees should be of at least medinm size when set, and should be protected by stakes or otherwise. Set only good trees. Better a few good trees from the nursery, well taken up, than many poor ones from the woods and pasture with poor or mutilated roots. Remember that what is worth doing is worth doing well.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

Market Reports.

TORONTO.

From Our Own Correspondent.

JULY 23.—There is little change to note since my last letter to the journal, and but little lumber has left our docks of late, all of them devoted to the storage of lumber being filled to their utmost capacity.

Shipments by carload from Midland to western points continue fairly active. The above line in connection with the C. V. R. R. have become favorite roads with the lumbermen over which to ship to points in western Ontario, and whenever shippers can reach consignees by this route they do so. The cause for this is easily accounted for. The managers of the former road have endeavored by all means at their command to encourage shipments of lumber over their line, and extremely liberal in granting low rates to lumbermen and their inspectors for travelling over their entire system, and the C. V. R. R. company have emulated the same spirit by promptly forwarding all shipments consigned to their care. In marked contrast to this is the conduct of the N. & N. W. R. R. company, who never seem contented until they have squeezed out the last available dollar from the lumberman, without whose patronage the road would be nothing. Were it not for the large amount of money paid into their coffers by the lumbermen of the past and present the bond holders of that line would have nothing left to-day as security, but the right of way and two streaks of rust, and yet those are the men who have to pay $150 per year for the privilege of passing over their road to look after the material that keeps the company's rolling stock employed, and this smallness is more pronounced in their management to-day than at any time of the road's history.

Now in regard to the retail trade here, I have visited most of the dealers, and nearly all agree on one point: quietness all along the line, and yet they say we cannot afford to break on prices, as we could not replace stocks much, if anything, below the cost of our present stock, this is undoubtedly true, although some sales of mill run stocks have been lately made at fully $1 per M less than would have been accepted three months ago, but the bulk of such stocks are only fit for the Eastern market, being comprised largely of 13 feet and 15 feet lengths. XXX shingles are scarce and prices have slightly stiffened, lath is more plentiful and some lower in car load lots.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

MONTREAL.

The *Gazette* of July 27th says:—Dealers report a better local enquiry during the week for both hard and soft kinds, but there are complaints on the part of buyers of the new supply not being sufficiently seasoned to suit their requirements. There has been very little change in values. The shipments of deals from this port continues on an active scale, and from the opening of navigation up to date has been the heaviest in the history of the trade. Deal charters to U. K. ports are reported at 75s. to 70s. steam, and last engagements of lumber to the River Platte were at $15@15.50 sail. There has been a sale of 36,000,000 feet of lumber, the total mill cut of Blodgett & Byrne, of Muskegon, Mich., to Chicago parties on private terms.

QUEBEC.

The *Chronicle* of July 20 says:—The market for timber continues dull and the only sales we have heard of are two parcels of white pine of only ordinary quality and about 50 feet average at about 19 cents measured off.

In hardwood we have not heard of any transactions.

DEALS.—40,000 pine deals, Montmorency 1883 sawing, have been sold at $108, $72, $36, $24, for 1st, 2nd, 3rd, and 4th, respectively f.o.b. bateau at mills.

BOSTON.

Cotton, Wool and Iron says:—General trade is moving along with the usual midsummer quietness. Stocks are light, but there is not much disposition to largely anticipate future wants. Eastern lumber is arriving pretty freely. Spruce boards are selling rapidly, except narrow, coarse lots which are dull and weak. Eastern pine are fair at steady prices. Laths are quick of sale. Western lumber is arriving freely and is generally having a fair sale. Poplar and ash have fallen off in price, with a large supply. Choice lots of cherry command good prices. Walnut is dull, with little of the very best arriving. Western pine is quiet, with a limited demand, Southern pine is very quiet, with prices for timber very low. Flooring and step plank are quiet and unchanged.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

CHICAGO.

The *Northwestern Lumberman* says:—A midsummer quietness is resting on the lumber business all over the country. Manufacture is going on steadily, though it is somewhat hindered on Saginaw river by high water. Sawing is not being urged at a speed characteristic of last season, because there is not the same motive of high prices and a speculative demand that was then felt as an influence carried over from the preceding year. While the consumption of lumber this season has been large, and probably fully equal to that of last year, the demand has to a greater extent than usual been allowed to draw on the yard supply, the stocking up process having been deferred to as late a date as possible, in the hope that prices would be adjusted on a more satisfactory basis. This disposition to defer buying in supplies is not peculiar to the West, but is as prevalent at the East. The merchants in lumber have a settled conviction that lumber in first hands is too high. Whether that conviction is right or wrong, it is doubtless true that the intense competition to sell on a falling market during the past year has depressed yard stocks below what they should be, considering the general demand for lumber to consume. But that does not destroy the fact that dealers are impressed with the opinion that the margin between prices at the mills and the yards is too narrow for profit, and that their hesitancy about restocking their yards this season is owing to that impression. It is this cause that has made business drag this season, and appear dull as compared with the two preceding seasonss:

Quotation are as follows:

Short dimension, green	$ 9 00@10 00
Long dimension, green	10 50@11 50
Boards and strips—No. 2	11 00@13 00
Boards and strips—Medium	13 50@16 50
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 25@ 2 40
Extra A	2 45@ 2 80
Lath	1 75@ 1 80

STOCK ON HAND JULY. 1.

	1883.	1882.	1881.
Lumber	430,375,078	443,039,546	352,391,329
Shingles	246,987,650	223,839,500	142,726,600
Lath	43,612,922	26,691,152	30,764,312
Pickets	1,486,077	1,902,187	3,170,228
Cedar posts	409,258	154,143	120,559

OSWEGO, N. Y.

From Our Own Correspondent.

We make no change in quotations; dealers are striving to maintain present prices. The past week has been a very dull one, with wet weather and high water very little has been done. The old cut has about all come forward, nothing now but new lumber, and pretty green at that. Receipts to date 1883, 73,000,000 feet; 1882, 94,000,000 feet.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

GLASGOW.

The *Timber Trades Journal* of July 14, says: A quiet demand was met at the sale of deals, &c., held here on the 5th inst., by Messrs. Singleton, Dunn, & Co., and the goods catalogued were, with the exception of a few lots, withdrawn. The catalogue comprised Quebec yellow and red pine deals, and Quebec and St. John, N. B., spruce deals, also a parcel of salvage timber. St. John, N. B., spruce deals, 15 to 24 ft. 12x3, were sold at 11d. per cub. ft., and 10 to 14 ft. 12x3 at 10¾d. Of the salvage timber, 18 logs teak sold at 5s. 7d. per cub. ft., 1 log ash at 1s., 274 sleepers at 8d. Further sales were made privately.

Probably the near approach of the summer holidays is having an unsettling influence on the market. Imports to Clyde during the past week have been moderate. The timber traders from Quebec will soon be dropping in, and it is expected that the spring fleet will be larger than last year's. Stocks being comparatively small, as shown by statement in last issue, gives opening for a pretty large import of fresh goods. Arrivals of wood goods at Grangemouth recently have been very heavy, the tonnage employed in conveyance amounting within the last two weeks to 12,596 tons. But this year's total imports to Grangemouth to date compared with corresponding period of last year are much lighter.

LONDON.

The *Timber Trades Journal* of July 14, says: There is a curious coincidence in the amount of timber-ship arrivals in London this week and last. Numerically they are exactly the same, numbering 78, but there are fewer steamers recorded this week, though the number of those is 32. In this fleet again firewood is very largely represented by about 20 cargoes, and some of these very heavy ones. Being now in the very middle of the import season, and the North American spring fleet fully due, we must expect large arrivals; but this week is not swollen by ships from the New Brunswick ports, which are yet to come forward. But the supply of pitch pine knows no cessation.

We hear that several steamers without engagement have gone on speculation to load from New Brunswick ports at 62s. 6d. to 70s.; also from Pensacola at 42s. 6d. and £6 10s. to United Kingdom and Continent.

Among the quick passages across the Atlantic this season we may mention that of the Hugh Cairns, chartered by Messrs. Cowie & Williams, of Birkenhead. She left the Mersey on the 19th of April and arrived in Quebec on the 16th of May, was loaded and despatched on the 5th of June, and arrived back to the Mersey on the 5th July, thus completing her voyage out and home a fortnight under three months. There would be small need of steam in the timber-carrying trade if sailors could be generally depended on to make such quick voyages as that of the Hugh Cairns.

We notice a company is being formed, called the California Redwood Company (Limited), with a capital of £900,000. The object of the company is to acquire extensive tracts of forest land where redwood grows. The trees are of gigantic size, and are said to very suitable for this market.

LIVERPOOL.

The *Timber Trades Journal* of July 14th says:—With a continuance of a moderate import, recent prices are maintained, and in some cases show a slight advance upon the rates recently obtained. Spruce has a firmer tendency, but whatever gain is made by increased prices here will not benefit the shipper, as any advance is discounted by the increased rates of of freight which have now to be paid in St. John, N. B., and other shipping ports. As the present quotations are below the cost of importation, it is only reasonable to suppose that the supply will be curtailed as much as possible, and this appears to be the determination of many of the producers of the Dominion. Birch timber is also somewhat scarcer and dearer, as will be seen from the result of the last auction sale held here, particulars of which will be seen below.

The strike of the iron-workers in the Midland districts will doubtless affect the timber of this port to some extent, and it is to be hoped that an amicable settlement of the dispute will soon be arrived at.

LIVERPOOL TIMBER SALES.

On Friday last, the 6th inst., Messrs. A. F. & D. Mackay offered one cargo of St. John, N. B., spruce deals, birch, &c., timber, two cargoes of Shediac deals, and other woods. All the fresh cargoes were sold at fair rates, the St. John, N. B., birch showing an advance upon previous prices.

SWEDEN.

The Stockholm correspondent of *Timber Trades Journal* under date of June 30th, says: Within the last fortnight the character of the vessels arriving to load wood cargoes at the lower ports of the Gulf have changed. Instead of the small sailing ships loading for the outports, we now see a very considerable number of steamers for London, Hull, Grimsby, Hartlepool, Bordeaux, and Antwerp. This is corroborative of the reports flying about relative to sales in large lines by extensive concerns at a reduction of price, and to which I referred in my last as likely to demoralize the trade on this side. This has no doubt to some extent taken place, and prices for the moment may be said to be an expression of the sellers' position in regard to unsold stock rather than to anything else. Each individual firm presumably knows best its own business, but there is a prevalent feeling that the firms who have suddenly turned around and taken the plunge in the downward movement of prices have scarcely acted loyally to their numerous Continental customers, who had

relieved them of a large proportion of stock at comparatively high prices, and who find themselves encumbered with goods bought probably at 15s. per standard higher on an average than their compeers in the United Kingdom are now being supplied at. With so large a proportion of the leading stocks sold, no evidence that I have yet seen seems a justification for the alleged necessity of taking the low prices recently accepted for the three lower qualities of redwood deals and battens. The present depression has, however, it is reported, caused an expression of opinion on the part of the shareholders of some of the large companies, who have lately held their annual meetings, as to the advisability of a further large reduction in the production next winter.

The export of sawn and planed wood from Sweden for the first five months of the present year, as compared with a similar period in 1882, was 140,583 Petersburg standards 1883, and 147,604 Petersburg standards 1882, showing but a slight difference in favor of last season. This return, although of little importance as reflecting the probable extent of the export for the current year, shows that a larger business has been transacted than has been anticipated. The ports south of Stockholm have been evi dently taking time by the forelock, and getting all off they possible could before the Gulf ports were accessible.

Transactions are reported of good brands from the lower Gulf as follows :—Red 9 and 11 in. deals—mixed, £10 15s. ; 3rds, £8 5s. ; 4ths, £6 5s. ; 5ths, £5 5s. Red 6½ and 7in. battens —3rds, £6 5s. ; 4ths, £5 5s. ; 5ths, £4 5s. ; and unassorted white battens at £4 10s. But holders of good fresh sawn redwood are not anxious to quit any large weight of goods at such low rates, which are quite unprofitable, with the prevalent strictness in assorting redwood in the districts referred to. Old-established firms, holding leases of forests bought fifteen or twenty years ago, may possible make such rates pay, but new concerns that have paid current prices for growing wood will find it hard enough to make ends meet at those figures. The price obtained for mixed, consisting of only about 10 per cent. of the production in favorable cases, is of much less moment than the figures at which 3rds and 4ths are disposed of. A large parcel of 3rd red deals is reported as having been sold at £9 f.o.b. Gothenburg, which is proportionately better than rates obtained in Norrland at present. I presume the sale has been of the Uddeholm, or similar good brand, that buyers can rely on as being of a quality very little inferior to Gefle, and not the mixed stock held by many of the Gothenburg middle men.

The position of the freight market has changed but little, as far as steam tonnage is concerned, for the last fortnight. Sailing ships, however, under 150 standards are somewhat scarce, and quotations for such keep stiffening. That this is only the natural consequence of the almost entire cessation in the building of such vessels will be apparent.

Of the tonnage built in 1882 the steamers numbered 21, of 3,509 tons, showing that same consists nearly exclusively of small coasters. In that year 33 steamers were purchased abroad, of a tonnage of 14,458 tons. The building of sailing ships has also almost ceased in Sweden. Both of the united Scandinavian nations are going pretty extensively into steamers suitable for carrying wood goods, for the building of which Sweden is well adapted.

A destructive fire broke out on Wednesday last in the wood-yard belonging to the Skelleftea Aktie Bolag at Klementsnas, resulting in the destruction of over 3,000 standards of sawn wood, as well as the laborers' dwellings, &c. The property destroyed was insured in local offices for £12,250, which, however, only covers part of the company's loss. The saw mill and flour mill are both intact.

The Korsnas Sagwerks Aktie Bolag had its yearly meeting at the mill a week ago, and divided 8 per cent. for 1882. It is understood that considerable amounts have also been written off. The neighboring Stora Kopparbergs Bergslag has also lately held its annual meeting, at which a dividend of 500 kronor per lot was declared. The capital of this concern is, if I remember aright, 6,000,000 kronor in 1,200 lots of 5,000 kronors each, and its history stretches as far back as the English "Wars of the Roses." I have reason to suppose that the directors of both these concerns meditate a very large reduction in the "log-get" next winter. This resolution comes somewhat *post festum*, but better late than never.

The weather is again very dry, and the rivers in Norrland are low, so low, in fact, that floating on many of the smaller streams has been stopped. The Ljusne river especially has unusually little water.

OTTAWA LUMBER RETURNS.

During the week ending 14th of July the following passed through the works mentioned :

DES JOACHIM'S SLIDES.

Rafts.	*Owners.*	*Cribs.*	*Pieces.*
1	J. & G. Bryson	113	2,903
1	Allan Grant	140	3,696
	E. B. Eddy	2	39
		255	66,638

CHAT'S SLIDES.

Between the 9th and 19th July :

Rafts.	*Owners.*	*Cribs.*
1	Alexander Frazer	145
1	J. R. Booth	161
1	W. Mackey	117
1	Barnet & Mackie	181
1	J. R. Booth	64
1	Boyd, Caldwell & Son	96
1	R. & W. Conroy	186
1	A. & P. White	106
1	J. R. Booth	97
		1,153

Left Ottawa since 9th July :

Rafts.	*Owners.*	*Cribs.*	*Pieces.*
1	J. Francis & Co	157	3,978
1	A. St. Jean	21	356
1	Frazer & Curry	145	3,924
1	Barnet & Mackie	181	4,581
1	J. R. Booth	323	5,211
1	Wm. Mason	12	180
5		739	18,230

Through Hull slide :

Sawlogs belonging to W. C. Edwards & Co.	982
Sawlogs belonging to Gilmour & Co	2,722
	3,703

Through Gatineau boom since 9th July :

Owner.	*Sawlogs.*
W. C. Edwards & Co	1,720
Hamilton Bros	15,301
G. B. Hall & Co	16,188
Gilmour & Co	2,090
	35,299

H. Harris, 15,261 railroad ties and 103 cords of shingle wood.

Pierre Charette, 4 cribs timber, 231 pieces.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec :

JULY 19.—Collins Bay Co., staves, Union cove.

J. S. Murphy, staves, Indian cove west.

D. C. Thompson, staves, Bridgewater cove.

Thos. Buck, white pine, ash, oak, &c., New Liverpool cove.

J. S. Murphy, elm, oak, ash, etc., Indian Cove west.

Cook & Gibbons, waney white pine, ash, &c., St. Michael's cove.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to July 20 :—

	1881.	1882.	1883.
Waney White Pine..	717,012	680,695	1,170,281
White Pine	1,952,358	1,609,864	1,083,127
Red Pine	517,564	245,117	119,086
Oak	1,333,986	628,204	815,036
Elm	651,345	378,577	137,641
Ash	241,899	149,158	107,680
Basswood	3,069	256	1,337
Butternut	897	1,850	807
Tamarac	5,700	1,332	2,765
Birch & Maple	121,191	273,852	135,757
Masts	—pcs	33 pcs	—pcs
Spars	— pcs	— pcs	— pcs
Std. Staves	125.0.3.7	223.0.3.10	278.4.1.4
W. I. Staves	191.0.0.25	566.5.0.10	272.5.1.28
Brl. Staves		10.6.3.4	53.9.3.12

JAMES PATTON,
Quebec, July 20. Supervisor of Cullers.

Utilizing the Attic.

At the saw-mill of E. & J. F. Webster, at Orono, Me., a plan has been adopted, which is described as follows : It was necessary to run a shingle machine in connection with the other machinery, and the construction of the foundation was such, the room upon the floor of the mill so restricted, and the need of removing the sawdust and other waste so great, that it was suggested by some of the workmen that the shingle machines be located in the attic on a floor over the gang and other saws. Accordingly a floor was laid, the machine located upon it, a railway track built under it so that the car receiving the waste could be easily tipped in and burned, the needed shutes for sending the waste into the cars were built, and last, but by no means least, an endless chain with block so arranged that the bolts could be sent up to the machine to be sawed. Now the logs are received upon the bed or main floor of the mill, there cut into bolts each the length of a shingle, then sent up to the machine, there sawed into shingles of the various qualities and trimmed for bunching, then sent down to the floor again and there bunched for market. This arrangement has now continued for several months, and is found to work admirably, so that the cost of sending the bolts up stairs and the waste down is much less than it would cost to get rid of the waste in any other way.—*Northwestern Lumberman.*

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

PORT HOPE.

A SUCCESSFUL INVENTOR.—The *Times* says : "We are very much pleased to learn that Mr. Thos. H. Ambrose, of this town has disposed of the right of his patent for his automatic freight car coupler for the United States to an American firm for the handsome sum of $15,000. This is a solid indication that Mr. Ambrose's patent possesses sterling qualities. Patent couplers can be counted by the hundred, every one of which we presume has some merit, but the fact that the majority of them lay dormant for years shows that Mr. Ambrose's must possess not only utility, but cheapness, strength and simplicity. We congratulate our esteemed townsman on his success.

A Rush of Logs.

GRAND RAPIDS, Mich., July 26.—An immense jam of logs extending up Grand River for miles has been lodged against the bridge of the Detroit and Grand Haven railway near the city. It was hoped the bridge would resist the tremendous pressure, but it fell with a crash this forenoon. The bridge of the Grand Rapids, Indiana & Chicago followed. Millions of feet of logs have gone down, sweeping all before them. It is feared the losses will reach many hundred thousand dollars.

MARET trestle on the Northern Pacific road, near O'Keef, beyond Missoula, and high up in the mountains, it is said to be the highest structure of the kind in the world. It is 866 feet long and 266 feet high, and contains 800,000 feet of timber. Track was recently laid across it, and a heavy construction train tested its strength to the satisfaction of the engineers.

An Ancient Breech-Loader.

A discovery which has just been made at Aleppo is likely to cause considerable surprise in military circles, for, according to the Turkish official gazette of that place, a party of engineers, while making excavations beneath the citadal of the town, have come upon a large wrought-iron, breech-loading cannon, which must have been buried for at least 250 years. That the weapon should be a breech-loader is in itself sufficiently astonishing; but the most extraordinary part of the affair is that the breech mechanism is almost exactly similar to that which has for so many years been fitted by Krupp, of Essen, to the artillery of the German army. The gun bears the name of its maker, Halebli Mustapha Osia, and is in a fairly good state of preservation.—*Mechanical News.*

MR. FRASER, Secretary of the Ottawa Iron and Steel Company, has returned from England after six months' absence. He reports that he has succeeded in organizing a company, with a capital of £350,000 to commence operations this fall. The company's mines are in Ottawa County near the line of the proposed Gatineau Railway, and are said to be very rich. The new company will establish blast furnaces and eventually go into the manufacture of steel rails.

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars ; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterbbrough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto

Burdock Blood Bitters

FREE TRADE WITH CANADA.

We would commend the following "open letter" taken from the July number of the *Century Magazine* (N. Y.,) to the attention of our readers as, although intended only for the "American" ear, it is upon a subject and contains statements of very great interest to Canadians :—

It seems to me strange that the question of an American zollverein was not brought prominently before the Tariff Commission. The people of the United States have been so educated to a belief in protection that it would be folly for any political party to work seriously for free trade or a tariff for revenue only, but a change might, perhaps be made which, while seemingly a concession to the free-traders, would in reality strengthen the protective character of the tariff. A protective tariff should be a discriminating tariff, so arranged as to shut off the competition of strong manufacturing nations, while encouraging trade with counties likely to afford a market for manufactured products. The United States have nothing to fear from the competition of Canada or Mexico, and free trade with them would give American manufacturers a greatly extended field. American capitalists are now interesting themselves in the development of Mexico, and a great deal of attention has been paid, of late, to the resources of that country ; but the prevailing feeling with regard to Canada is one of indifference, occassioned by ignorance of its resources.

To the average American, the name of Canada calls to mind a narrow strip of inhospitable country lying to the north-east of the United States, and inhabited by an unprogressive class of people. It is now, in fact, the name for the whole of Europe, rich in minerals, and possessing the finest fisheries and the largest area of land adapted to the production of first-class wheat in the world. The most fertile part of Canada lies in the north-west, although the crop reports for 1882 show a higher yield of wheat per acre in Ontario than in any of the American states. Over the whole of the Canadian north-west territory, formerly known as the Hudson Bay territory, from the American boundary, line forty-nine, to latitude sixty degrees, the same flora prevails, and there is little difference in the climate, although it becomes warmer toward the west on account of the Chinook breezes which come through the passes of the Rockies and cause a rise of sixty degrees in the temperature in a few hours. The valley of the Peace river, twelve hundred miles north-west of Winnipeg, is said to have a finer climate than Manitoba. In explanation of this uniformity of temperature in such a wide range of latitude, Professor Macoun says :—"It was long ago asserted as a principle by goologists, that land in quantity situated to the southward of latitude forty degrees north, very materially raises the temperature of lands lying to the north of such parallel." He gives metcorological tables showing that there is almost no variation in the temperature between forty-nine and sixty degrees, and that the climate compares favourably with that of European couutries in the same latitudes.

Almost the whole of this vast territory will yield from twenty-eight to forty bushels of wheat per acre. United States Consul Taylor who has made a study of the Canadian north-west for years, has gained for himself the nick-name of Saskatchewan Taylor, on account of his praises of the section of the country bordering on the Saskatchewan river. He says three-fourths of the wheat producing area of North America lies within the Dominion of Canada. The Canadian Pacific Railway is being pushed through to British Columbia with an energy almost unparalled in railway construction ; and during the last three years, Manitoba has been filling up with settlers almost as rapidly as the Western States did in their most progressive days. Already a prosperous trade has grown up between this part of Canada and the cities of the eastern provinces, Winnipeg alone purchasing $12,000,000 worth of goods from them last year. As Manitoba and the north-west become thickly settled, and the wonderful resources of Canada's most western province, British Columbia are developed, this trade will grow to enormous proportions. At present, most of the settlers are Canadians and Europeans, but the time will come when the stream of migrants from the Eastern States will be diverted to this region, and then, unless free trade prevails, the United States will experience what Canada did during the rapid development of the Western States—a loss of population without any compensating advantages in the way of trade, while eastern Canada will be built up by the trade of the north-west.

But remove the tariff wall between the two countries, and the bulk of this trade may be secured by the United States, for settled Ontario is separated from Manitoba by a stretch of one thousand miles of rocky country, enormously rich in minerals and timber, but almost useless for agricultural purposes, while the territory of the United States is well settled to the borders of Manitoba. Chicago is many miles nearer to Winnipeg than Toronto, and St. Paul and Minneapolis are nearer still. These cities could control most of the north-west trade, if the tariff were abolished, and the cities of the Eastern States could compete on equal terms with those of eastern Canada.

Of course, this would not prove advantageous to eastern Canada, whose growth would be greatly retarded. The effect it would have upon the north-west is not so apparent, but it would certainly strike a blow at the future greatness of Winnipeg, Manitoba's chief city, which has in four years grown from a straggling village to a flourishing modern city with a population of about 30,000. So long as the protective tariff is maintained, and the Canadian Pacific Railway does the carrying trade for the north-west, Winnipeg will be the gate way of western Canada, and, controlling the trade of the largest wheat producing area in the world, will become a second Chicago. Already some of the manufacturers of Ontario, to save the expense of carriage, have started factories there, and others will doubtless follow suit. With free trade between the two countries, Winnipeg would have few if any advantages over St. Paul and Minneapolis as the distributing centre of the North-west, and would be exposed to competition not only with them but with Chicago.

Appearances would indicate that Canadians are strongly imbued with the protection idea, as at the last two elections, when it was made the issue, the Conservatives favoring and the Reformers opposing it, a large majority of the former were elected. But many of those who voted for protection did so merely with a view to forcing the United States, by retaliation, to entertain the idea of reciprocity. Americans could rely upon the full support of the Reformers, with a liberal sprinkling of Conservatives, in negotiations for free trade : and, as many of the Conservative members were elected by small majorities, a slight change in public sentiment might make a great change in parlimentary representation. The Conservatives themselves could consistently favor an American zollverein, for many of their leaders and newspapers expressed themselves in favor of actual free trade, but opposed the one sided policy that would confer upon Americans favors which they refused to Canadians. But that was before the north-west trade had developed ; and as the policy of the present Government is to build up trade botween the provinces, they might with reason object to a measure that would divert trade to the United States. The Canadian customs act of 1879, now in force, provides for the admission of natural products free of duty whenever the United States are willing to reciprocate ; and the people of Montreal favor the abolition of the duty on grain in any event, as a great part of the grain export trade of the Western States is lost to the city, it is claimed, on account of the bonding system.

WATSON GRIFFIN.

A WOODEN BOILER.

The *Northwestern Lumberman* says :—While we hear of so many substitutes for wood as to make the hearts of the forest denudation alarmists beat for joy, it is very rarely we hear of forest products being put to a use for which wood has been hitherto deemed entirely impracticable. Such a case, however, has just come to our notice, and, strange to say, it is not a Yankee invention either, and did not originate in the land of wooden nutmegs, but is to be credited to the inventive genius of a New Jersey youth. It is said : "A Paterson, N. J., mechanic named William Sutcliffe, is building a steam-boat with a wooden boiler, which will be placed in the Passaic river above the falls in a few days. The boat is a propeller 16 feet long. The boiler is made of a new ale cask and is said to be capable of standing a pressure of 200 pounds to the square inch. It has already been satisfactorily tested at 40 pounds pressure. This novel boiler is fitted with flues, and the fire, instead of being under, is on top of it, a draught being supplied by a tube from undeneath. Mr. Sutcliffe is a thorough and practical mechanic, holding a responsible position in one of the Paterson locomotive works. It is the first time in history that an attempt was ever made to raise steam in a wooden boiler, and it looks as though the experiment would prove a success."

NORTH-WEST NOTES.

To the Editor of the Canada Lumberman.

DEAR SIR,—The journey from Winnipeg eastward on the newly opened line of the C. P. R. is interesting in many respects. The first thing noticeable in the appearance of the country is the gradual change from prairie to woodland. The poplar bluffs, as the groves are called, because they are generally on the higher ground, are more numerous, and the intervening spaces of prairie have more than is usual of scrub or bushes. Farther on the groves increase in extent and the spaces grow less ; the trees also increasing in size with the extent of ground covered. Still to those who have seen the great forests of Ontario the timber seems insignificant. After a journey of 40 or 50 miles we begin to see the rounded weather worn heads of occasional Laurentian rocks, as they are geologically called. It is the same formation which extends throughout the northern part of our country from the Gulf of St. Lawrence, from wheuce comes its name, to this part of Manitoba. The change of timber now becomes more marked. The evergreens begin to occupy the landscape, and the grass retains sole possession only in the lowest meadows. The prevailing poplar of the west still claims a place, but the Jack pine spruce and tamarac are lords of the now more scanty soil. This Jack pine is a species unknown in Ontario ; the trunk resembles the Norway or red pine, except that the bark is darker in color, and has a rough, dead appearance ; there is a much thinner sapwood, which is quite an advantage. The heart wood is heavier and darker in color like tamarac. The foliage resembles white pine, but the leaves are short and scanty, giving the tree a stunted appearance ; it never grows large and is very suitable for ties and small timber.

As we progress on our journey the country assumes the appearance of a nearly unbroken forest. The slender conical tops of the spruce growing thickly in the hollow slopes of the rocky hillsides makes the landscape decidedly picturesque. Here, too, begins the lake region of the country. It is lakes to the right and lakes to the left and lakes to the front and rear. They cover about one-fourth of the whole surface, are of all sizes aud shapes, but are generally long and narrow. The waters are never muddy like prairie rivers aud lakes, but are always translucent, though sometimes brown in color from the peaty swamps, from which they come.

This is the country that calls out the skill of the railway engineer. There is not 40 rods of straight level track on the surface anywhere to be seen. Deep short rock cuts, then trestle work over the end or neck of lake. Next we seem to be clawing along the side of a high cliff, then through a short, then over a seemingly bottomless muskeg, or peat bog, and so on *ad infinitum*.

Stations are few and far between. Workmen's deserted shanties are plentiful enough, their dilapidated appearance and the burned portions surrounding, give much of the road the air of desolation. There is also yet much to be done in the way of levelling and ballasting the roadway.

Keewatin is a thriving looking place, springing up with this new move in gold mining, we can't call it an excitement, for there is none. Like nearly everything else now in the North-west, it takes the shape of business. Keewatin has also a few good lumber mills.

Yours, &c.,
W. H. TROUT.

Vermillion Bay, July 7th,
Manitoba or Ontario, 1883.

THE ENGLISH MARKET.

James Smith & Co.'s Liverpool wood circular pated July 2nd, says :—The arrivals since our last have been 55 vessels, 37,468 tons, against 52 vessels, 39,983 tons, in the corresponding period last year, and 43 vessels, 31,695 tons in 1881.

FROM 26TH JANUARY TO 30TH JUNE, 1883.

	Vessels.	Tons.
Quebec	8	5,050
St. John, N. B., &c.,	35	31,899
United States	40	29,841
Baltic	102	41,577
Total	185	108,367

FROM 26TH JANUARY TO 30TH JUNE, 1882.

	Vessels.	Tons.
Quebec	8	4,700
St. John, N. B., &c	34	32,788
United States	65	53,643
Baltic	74	34,211
Total	181	125,345

FROM 26TH JANUARY TO 30TH JUNE, 1881.

	Vessels.	Tons.
Quebec	7	5,847
St. John, N. B.,&c	23	22,722
United States	59	42,666
Baltic	60	24,235
Total	149	95,470

The prospects for the season are somewhat more cheering, caused no doubt by good reports from the agricultural districts, fine growing weather, moderate imports of timber and stocks, which taken as a whole are not heavy. If this state of things continues (with peace at home and abroad), confidence may be expected to return, and the doubtful feeling induced by the recent suspensions soon be removed, but great care and moderation will have to be displayed both on the part of shippers and importers to reach this good result. The money market continues easy, the bank rate remaining at 4 per cent. Freights appear firm in spite of the increased steam tonnage of late offering, and very ttle would cause them to advance. Insurance rates are slightly easier, but for the fall shipments are still so high that they must affect seriously both purchases and shipments.

COLONIAL WOODS.—Yellow Pine : None the new import is yet to hand ; there is a fair demand, the consumption for the past month having been 41,000 cubic feet, against 53,000 feet in June last year. The stock is ample, the fresh arrivals being shortly due. Sales have been private from the yard. By auction a few logs of St. John wood realized 2s. per cubic foot, and several parcels of Quebec and Miramichi, stored from last season, have been offered but not sold. Of red pine there is a stock of 11,000 cubic feet, whereas the quantity gone into consumption is but 1,000 feet. The sales have been by private only. Of ash there is no stock at present ; good wood is wanted. Elm : There is a fair enquiry, but no sales are reported. Birch is in good demand, and 32,000 feet have arrived during the past month. By auction 552 logs prime fresh wood from St. John, ex Palermo, were sold at from 16d. to 2s. 6½d. per foot, the average being 19d. per cubic foot. By private a cargo of Cape Breton wood has been sold to arrive at 15d. per foot for 15-inch average, c.i.f., and a cargo of Prince Edward Island, per Ethel Banche, at 16½d. per cubic foot, ex quay. The present stock is only 40,000 cubic feet. Oak : 6,000 cubic feet have been imported during the past month : 18,000 feet have gone into consumption, leaving a stock of 136,000 feet on hand. Sales have only been by private, as the 234 logs from Quebec offered at auction were withdrawn unsold. Oak scantling is in fair demand at prices ranging from 2s. 6d. to 3s. per foot, according to quality and selection. The stock, however, is large, 218,009 feet, and fresh arrivals continue to come forward too freely. New Brunswick and Nova Scotia Spruce Deals : There has been a full import for the time of the year, but no improvement in the consumption, and the stock of 11,715 standards may therefore be considered somewhat heavy. During the month the sales have been as low as £6 12s. 6d. c.i.f. for St. John

deals, but the latest sales have been at £6 16s. 9d. per standard; while by auction the cargo, ex Palermo, from St. John, realized from £6 17s. 6d. to £7 7s. 6d. per standard, and averaged £7 2s. 6d. per standard; lattely, there has been more enquiry from the outports as well as the continent. Pine deals, from St. John have been sold at from £7 7s. 6d. to £8 2s. 6d. per standard for small lots. Quebec pine deals have arrived, per steamer, in about the same quantities as last season, and few parcels have been sent on the market; the only sales have been of third quality pine deals, according to specification, at from £8 15s. to £9 2s. 6d., and red pine deals, mixed qualities, at £9 5s. per standard, ex quay. Quebec staves are quiet, and sales have been by private only, at rates below the cost of import. Palings and laths: The former have been sold at 85s. per 1,200 pieces for 5 feet x 1 inch, and at 70s. for 4 feet x 1 inch.

Ornamental and Timber Trees Not Native of the Province of Quebec.

BY CHAS. GIBB, ESQ., OF ABBOTSFORD.

Mr. Gibb has been at great pains, not only to introduce hardy fruits into the Province of Quebec, but also such ornamental and forest trees as are likely to prove valuable in that province. This little pamphlet of nearly eighty pages is full of information of great value, not only to the Province of Quebec, but also to those in the Province of Ontario who live in the colder latitudes. We note that he desires particularly to call attention to the Russian mulberry. He says it has been introduced into Minnesota, at latitude 54, where it has succeeded perfectly. It begins to bear fruit at two years old, that the fruit is valuable, and is produced in large quantities, that the timber is good for building purposes, and lasts a long time when made into fence posts or railway ties, and its leaves are the best food in the world for silk worms. We commend this pamphlet to the careful perusal of all who are interested in the growth of forest and ornamental trees in the northern portions of Ontario.

Piling Lumber.

Lumber should not be allowed to depreciate for lack of proper care in piling. Piles should be built so that the front cross pieces shall be higher than the back, and each in succession be overlapped, or laid out a trifle beyond the previous one. A pile 20 feet high should incline outward from base to top at least 18 or 24 inches. The sides of the pile should be carried up plumb, each cross piece directly on top of another, so that the weight shall rest solidly on each, and on the foundation timber. If the courser be placed a little forward or back of the previous one the weight above will twist, warp and perhaps break the lumber. Piles should never be placed less than three feet apart, and boards in the pile should always be laid with from two to three inches of space between them. —*American Lumberman.*

A Saw Mill Burned.

For several days the saw mill of Thompson & Avery, at Sharbot Lake, had been shut down for repairs. The machinery was out of gear and workmen were engaged in fixing it. About ten o'clock last evening the mill took fire and burned with great rapidity. Several of the workmen had a narrow escape from being burned. It is supposed that a light fell upon some of the waste oil about the machinery and hence the conflagration occurred, The loss totals about $3,000, with an insurance of $800. A considerable quantity of shingles and lumber was destroyed. The mill was burned in a very short time. Thompson & Avery may rebuild, or they may purchase one of the other mills in the vicinity.—*Kingston Whig.*

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
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To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

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FORWARDERS,

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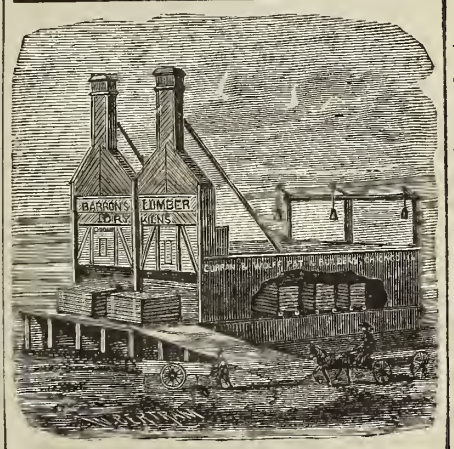

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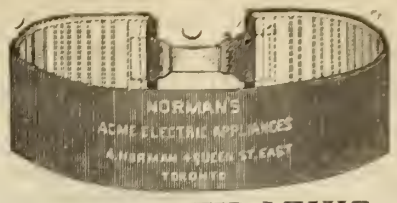

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The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

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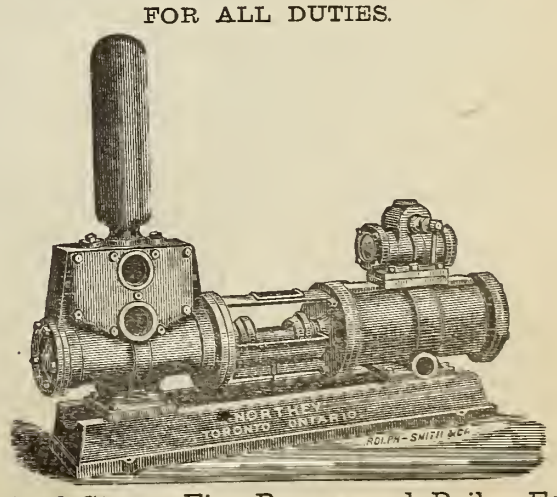

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REVIEWS.

PRESERVING AND REPLANTING TREES.—One of the most useful public reports that has come before us,is that compiled by Mr. R. W. Phipps, for the Ontario Government, on "The Necessity of Preserving and Replanting Forests." Though most of the matter is not new to those interested in this important subject, it is well selected and ar ranged, and so presented as to afford valuable and very complete information on the subject to the general reader, and especially to our agriculturists, who are not sufficiently acquainted with their own practical concern in this question. The teachings of scientific men as to the necessity of forests in a climatic and sanitary point of view are given at sufficient length, and it is shown how various countries have suffered from their improvidence in this respect by the impairment of their agriculture and in other ways. Still more valuable is the voluminous information as to the practice o forestry in other countries, and of the valuable results of the scientific treatment of public and private forests. Mr. Phipps, who seems to feel a great interest in this subject and to have been a close observer, points out how this information bears upon our own case, and urges, as we have often done, the necessity for a cessation of the present wasteful denudation of our forests and the perpetual maintenance of a portion of them. We hope this report will be of service in introducing a better system, and to aid in this we will hereafter present our readers with extracts from it.

ASSESSMENT OF TIMBER LIMITS.

The Bobcaygeon *Independent* says:—A case of considerable importance to lumbermen was tried on Wednesday, 25th July, in Haliburton, before his Honour Judge Peck. The township of Glamorgan, acting under legal advice, had assessed the various lumbermen possessing timber limits in the township, for the value of their interest in their limits. The lumbermen interested were M. Boyd, R. C. Smith, W. J. Trounce, and Green and Ellis. The assessments were as follows:—M. Boyd, $6,500; R. C. Smith, $12,000; Trounce, $8,000; Green and Ellis, $1,000. The assessor had made this assessment on the advice of Kerr, Blake and Carrels, which advice had been concurred in by Mowat, MacLennan and Downey. At the Court of Revision this assessment was appealed against as illegal, but the Court confirmed the assessment with some slight alteration; and this decision was appealed to the County Judge. Mr. Baron, of Lindsay, appeared for the lumbermen jointly. The case of Glamorgan was conducted by R. G. Sidley, Esq., the Reeve. Mr. Baron opened the case, and contended that the assessment was illegal as the lumbermen did not own the limits, which were Crown property, and as such were exempt. All that the lumbermen owned was the right to cut the lumber from year to year, a right which was determinable at any moment. Also he urged that it was not the intention of the Government that this property should be taxed, and although it was not especially exempted by statute, yet it was clearly not property which could be taxed. It was merely an occupation. The interest in the limits could not be sold under an execution, nor could the right be transferred from one person to another without the express consent of the Government, thereupon it was not a property liable to assessment. Mr. Sidley replied in an address of considerable length, displaying great knowledge of the subject, and treating it with great knowledge, tact, and ability. He said the township was not taxing the limits as real estate, that being clearly exempt, but they were taxing the interest of the lumbermen therein. Money was personal property, and just as much money as a lumberman invested in his limits was clearly taxable. If this interest in the limits was exempted, the exemption would be mentioned in the statutes, and he challenged Mr. Baron to shown that any such exemption was anywhere referred to. If a man had a sum of money invested in a bank, it was taxable, and if the same money were invested in a limit, it was absurd to suppose that it would be exempt. Mr. Baron had said the interest of the lumbermen could not be sold under execution, but Mr. Sidley reforred to the case of the Scott estate in Cavendish, when the interest left by Mr. Scott had proved most valuable after it had been in Chancery. The case of Bennett vs. O'Meara, 15, Grant s Chancery Reports, proved that the interest of the lumbermen was personal property, and he need not tell the Court that all personal property was liable to taxation. The case of the Queen *ex rel.* Latchford *v.* Frizzle was quoted by Mr. Sidley, in which it was held that a party having mere possession of a lot determinable at any moment, was rightly assessed. He quoted eight other cases in which it was decided that if an occupier of Crown property received a benefit therefrom he was liable to be taxed for his interest therein though the property itself was exempt. Thus Lady Emily Ponsonby had received a grant of gratuitous use of apartments in Hampton Court Palace, but her interest in those apartments was held to be taxable, though the property, being royal property, could not be touched. In the same way, interest in lumber limits could be taxed, though the land itself, being Crown property, was exempt. Mr. Sidley likewise dwelt on the injustice of such exemption, pointing out that whilst the lumbermen was receiving all the benefit of the construction of roads, and of municipal government, he did not pay one cent toward local burdens. He concluded by quoting a decision of Mr. Justice Burton, to the effect that every species of property should bear its just share of the burdens of the place of which it received the benefit. Mr. Sidley expressed the hope that the decision of the court would be such as not to compel a poor man to pay a rich man's tax.

The Court after hearing the arguments on both sides, and examining a few witnesses, proceeded to give judgment. His Honor observed that the timber licenses were out of date on the 30th of April in oach year. Consequently on that date the property reverted into the hands of the Crown, and as it passed into the hands of the Crown before the annual year's assessment had been completed it could not be taxed. This disposed of the case as to the timber limits, but the chattel property, the clearances and the shanties, were all accessible unless taxed at the head office of the lumberman. The case occupied three hours in arguing, the Court being crowded by lumbermen and parties interested. Mr. H. Junkin, for Smith of Fenelon, Mr. Austin, assessor of Fenelon, and Mr. G. Bick, of Bobcaygeon, were present. Mr. Sidley received the compliments of many friends on the able manner in which he had conducted the case.

Swedish Mills Burnt.

The *Timber Trades Journal* says:—We learn from our Swedish correspondent that there has been a large fire at Skelleftea, resulting in the destruction of several thousand standards of deals, &c. A considerable quantity of the timber destroyed had been placed, we understand, on the east coast, and steamers chartered to bring it over. These latter will have to be diverted somewhere, and thus take goods out of the market that would have been available for other bottoms. It was only last week we chronicled the great fire at Mersrs. Grigorieff's saw-mill at the mouth of the Neva, and now we have in addition to that of Skelleftea to notice a serious outbreak of fire at a Drammen mill destroying some thousands of pounds worth of stock. The great frequency of these conflagrations will add seriously to the rates of insurance on wood property.

Preservation of Forests.

The following letter appears in the Toronto *Globe*:—

SIR,—To-day's mail brought me from South Australia what should interest many of your readers, especially following your notice of Mr. Phipps' report on the necessity of preserving and replanting our forests, and as very ample references is made in this report to what is being done in South Australia among trees, under the supervision of my brother as conservator, I have the greater pleasure in submitting, as a lesson for Ontario, the most recent provision of that enterprising colony.

The sheet sent me has a list of 480,000 trees set aside for one season's distribution free, among "corporate bodies, farmers and others, owners of land." The conditions upon which young trees are obtained from the Government nurseries, of which there are five, are few and practical, so as to ensure a proper reciprocity between settlers and the Legislature. Directions are given for planting, as well as advice regarding the soil and situation most suitable for each kind of tree named.

So then Australia not only gives advice, but supplements with materials free to her settlers.

WM. BROWN.

Agricultural College, July 17.

The Metallization of Wood.

Les Mondes describes the following process invented by Mr. Rubennick for metallizing wood:

The wood is first immersed for three or four days, according to its permeability, in a caustic alkaline lye (calcareous soda) at a temperature of from 74° to 90°. From thence it passes immediately into a bath of hydrosulphite of calcium, to which is added after 24 or 36 hours a concentrated solution of sulphur in caustic potash. The duration of this bath is about 48 hours, and its temperature is from 35° to 50°. Finally the wood is immersed for thirty or fifty hours in a hot solution (35° to 50°) of acetate of lead. The process, as may be seen, is a long one, but the results are surprising. The wood thus prepared, after having undergone a proper drying at a moderate temperature, acquires under a burnisher of hard wood a polished surface, and assumes a very brilliant metallic luster. This luster is still further increased if the surface of the wood be first rubbed with a piece of lead, tin, or zinc, and be afterward polished with a glass or porcelain burnisher. The wood thus assumes the appearance of a true metallic mirror, and is very solid and resistant.

Narrow Escape at Eddy's.

OTTAWA, July 23.—About half-past eight this morning fire was discovered in one of the dry houses in connection with Eddy's works, Hull. The material within the building being of such an inflammable nature the flames soon spread around the roof of the building, and eye-witnesses made up their minds that a disastrous fire would ensue. The Union steam engine turned out and did good service, and Mr. Eddy s engine kept two continual streams on the north-west corner while the Union played upon the other end. The flames were confined to the centre of the building. The damage was small.

Strike of Raftsmen.

A Montreal despatch dated July 26, says:—Some forty or fifty raftsmen, working for G. B. Hall & Co., struck at Bordeaupluffe, and when other laborers were substituted for them they became dissatisfied, and tried to obstruct the new-comers. As the latter resisted any interference, the owners applied for protection to the authorities yesterday, when the police magistrate, high constable, and some detectives immediately proceeded to the scene. The strikers having heard of a force coming, they hauled down their colors and begged to be reinstated, which was done. The prompt action of the authorities prevented, it is said, a very serious disturbance.

LIVERPOOL STOCKS.

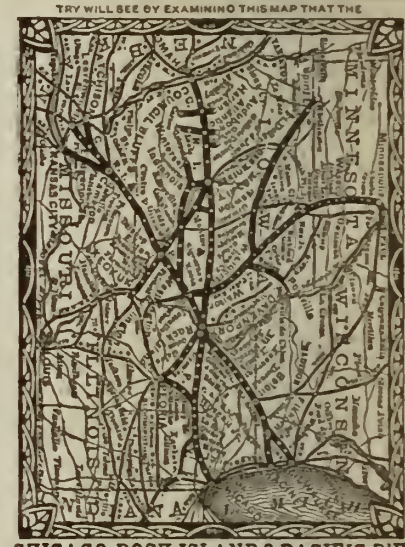
We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on June 30th, 1882 and 1883, and also the Consumption for the month of June, 1882 and 1883:—

	Stock, June 30th. 1883.	*Stock, June 30th. 1882.*	*Consumption for the month of June 1883.*	*Consumption for the month of June 1882.*
Quebec Square Pine	98,000 ft.	46,000 ft.	14,000 ft.	12,000 ft.
" Waney Board	99,000 "	112,000 "	9,000 "	38,000 "
St. John Pine	34,000 "	25,000 "	18,000 "	3,000 "
Other Ports Pine	00,000 "	00,000 "	0,000 "	0,000 "
Red Pine	11,000 "	9,000 "	1,000 "	5,000 "
Pitch Pine, hewn	571,000 "	975,000 "	90,000 "	196,000 "
" Sawn	724,000 "	617,000 "	140,000 "	169,000 "
Planks	51,000 "	100,000 "	28,000 "	28,000 "
Baltic, &c., Fir	77,000 "	75,000 "	40,000 "	42,000 "
Sweden and Norway Fir	0,000 "	0,000 "	0,000 "	0,000
Oak, Canadian	392,000 "	287,000 "	87,000 "	114,000 "
" Planks	0,000 "	0,000 "	0,000 "	00,000 "
" Baltic	0,000 "	0,000 "	— "	0,000 "
Elm	22,000 "	30,000 "	5,000 "	3,000 "
Ash	— "	— "	— "	— "
Birch	40,000 "	22,000 "	38,000 "	42,000 "
East India Teak	15,000 "	83,000 "	18,000 "	13,000 "
Greenheart	121,000 "	54,000 "	9,000 "	20,000 "
N. B. & N. S. Spruce Deals	11,715 stds.	7,588 stds.	6,569 stds.	1,810 stds
" Pine	— "	— "		
Quebec Pine & Spruce Deals	4,628 "	4,777 "	1,893 "	6,801 "
Baltic Deals,	3,204 "	1,674 "	548 "	770 "
" Boards	— "	— "	— "	— "
Norway prepared Flooring	5,114 "	2,726 "	1,545 "	545 "

THERE is no excuse for suffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why suffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



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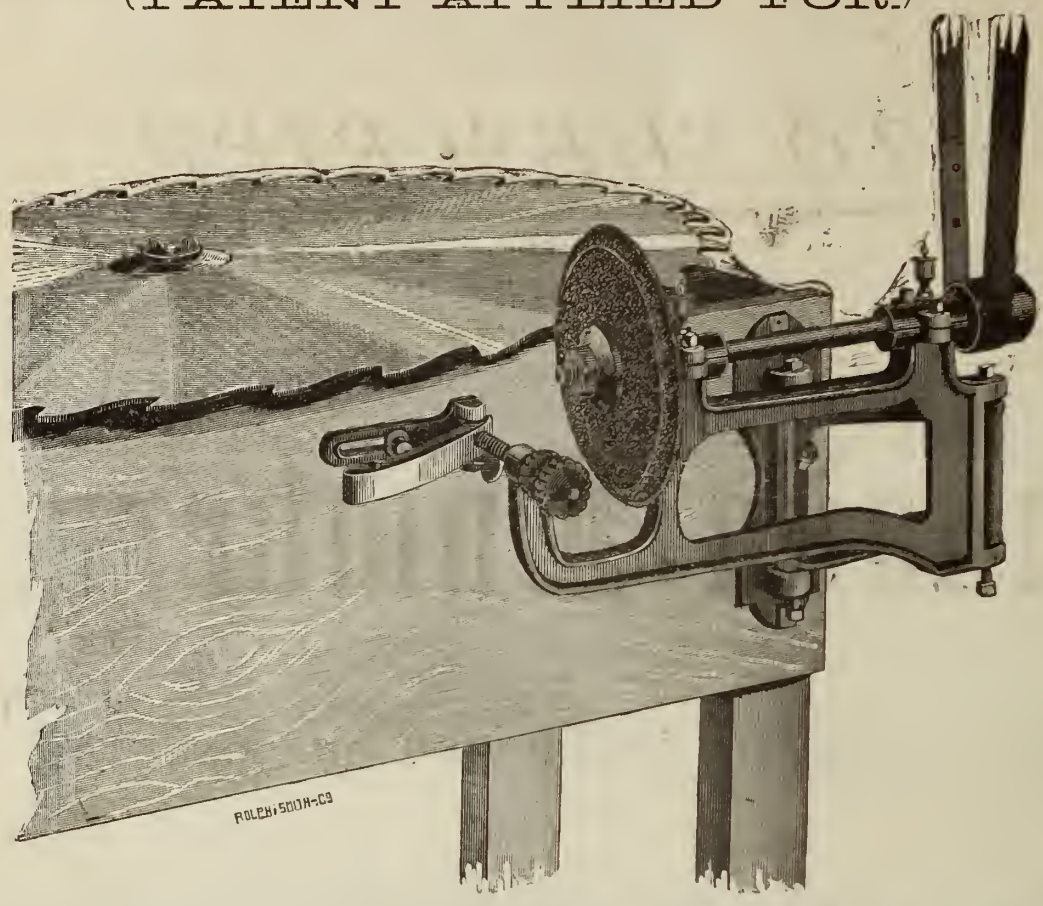

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VOL. 3. PETERBOROUGH, ONT., AUGUST 15, 1883. NO. 16.

WOOD FINISH.

The patented preparations known as wood fillers are prepared in different colors for the purpose of preparing the surface of wood previous to the varnishing. They fill up the pores of the wood, rendering the surface hard and smooth. For polishing mahogany, walnut, etc., the following is recommended: Dissolve beeswax by heat in spirits of turpentine until the mixture becomes viscid; then apply by a clean cloth, and rub thoroughly with a flannel or cloth. A common mode of polishing mahogany is by rubbing it first with linseed oil, and then holding trimmings or shavings of the same material against the work in the lathe. Glass paper followed by rubbing also gives a good lustre. There are various means of toning or darkening woods for decorative effect. Logwood, line, hrown soft soap, dyed oil, sulphate of iron, nitrate of silver exposed to the sun rays, carbonate of soda, bichromate and permanganate of potash, and other alkaline preparations are used for darkening the wood; the last three are specially recommended. The solution is applied hy dissolving one ounce of the alkoli in two gills of boiling water, diluted to the required tone. The surface is saturated with a sponge or flannel, and immediately dried with soft rags. The carbonate is used for dark woods. Oil tinged with rose madder may be applied to hard woods like birch and a red oil is prepared from soaked alkanet root in linseed oil. The grain of yellow pine can he hrought out hy two or three coats of Japan much diluted with turpentine, and afterward oiled and rubbed. To give mahogany the appearance of age, lime water used before oiling is a good plan. In staining wood, the best and most transparent effect ohtained by repeated light coats of the same. For oak stain a strong solution of oxalic acid is employed; for mahogany, dilute nitrous acid. A primary coat or a coat of wood fillers is advantageous. For mahogany stains the following are given: 2 oz. of dragons blood dissolved in one quart of rectified spirits of wine, well shaken; or raw sienna in beer, with hurnt sienna to give the required tone; for darker stains hoil half a pound of madder and 2 oz. of logwood chips in one gallon of water, and brush the decoction while hot over the wood. When dry, paint with a solution of 2 oz. of potash in one quart of water. A solution of permanganate of potash forms a rapid and excellent hrown stain.—*Amateur Mechanics (London).*

THE DULUTH SQUABBLE.

Mr. R. C. Mitchell, the newly appointed receiver of the government land office at Duluth, was arrested by United States Deputy Marshal Bracket, at Duluth, on July 14, charged with fraudulent pre-emption of pine lands in Vermillion lake district of Northern Minnesota. Mr. Mitchell is editor and proprietor of the Duluth *Tribune*, and supported the Hon. Knute Nelson, memher of Congress elect, in his famous fight with Kindred in the late congressional campaign. A warrant was issued for the arrest of H. L. Gordon, who enjoys the title of "Thundering" Gordon in the upper country, and is alleged to have heen a partner with Mitchell in the pre-emption grab. The charges were brought hy ex-Gov. Marshall, of Minnesota, special agent of the United States land department, and in the main are to the following purport: It is alleged that H. L. Gordon and R. C. Mitchell did conspire, comhine, confederate, and agree together, with A. K. Lovejoy, Frank C. Gordon, G. Blades, W. Peak, W. F. Harley, Walter Gordon, Amos Malder, J. Malder, L. B. Draw, Proctor Morgan, Gus Marden, and nineteen others, to defraud the government of lands in township 63, range 16 west; that arrangements were made by Gordon and Mitchell with the others mentioned, whereby they were to proceed, and did proceed to the township indicated, and to took up lands under form of the pre-emption law. These lands were afterwards turned over to Mitchell and Gordon foe a sum of money that had been agreed upon before the pre-emptions were made.

Mr. Mitchell says that he will he ahle to refute these charges, and prove what he has done in acquiring lands is at least technically legal. He waived examination, and gave bonds in the sum of $5,000 to appear in the United States district court at Winona, Minn., in October. Gordon could not he found at time Mitchell was arrested.

This legal action against the land grabbers at Duluth caused much excitement in pine land, newspaper and political circles in northern Minnesota. It is the culmination of a fight that has heen going on over the receivership of the Duluth land office, and involved the politics of the 5th congressional district. When Knute Nelson was elected to congress, Receiver Spalding had to submit to the decapitating process, while R. C. Mitchell, who had worked hard for Nelson hy means of the Duluth *Tribune*, was appointed in Spalding's place. But Mitchel has not yet received his government commission, and his arrest is said to he a movement to prevent his ever getting it and heing confirmed in office. It is alleged hy the anti-Mitchell partisans that Gordon and Mitchell failed to pay the men whom they hired as pre-emptors for the service rendered, and that they have openly charged their employers with had faith.

The Duluth *Times* has an old score to settle with Mitchell of the *Tribune*, and the *Times* takes this opportunity to get even with its adversary. It says that it is known that Mitchell has for years been engaged in fraudulent pre-emptions. He was receiver in the land office when the pine boom first struck the Duluth district, and he had the opportunity to become familiar with the workings of the office. M. C. Russell succeeded Mitchell, though the latter tried hard to retain the place. He became interested with H. L. Gordon in land-grabbing schemes, and they employed Scandinavians and Finlanders in large numhers to pre-empt lands for them. The *Times* declares that at one time a representative of that paper counted twenty-seven Finlanders in Gordon's and Mitchell's office all waiting for their pay for pre-emption service. There are charges enough, if they can be proved, to convict Mitchell and Gordon of fraudulently obtaining pine lands, hut without a doubt the defendants will appear in court with a formidable array of counter-testimony. Mitchell has a powerful political influence to hack him, and great moneyed interests are involved on hoth sides. It is doubtful if either party in the contest can really afford to have the courts tear off the mask that covers the means whereby pine lands have been acquired in northern Minnesota.—*Northwestern Lumberman.*

ABOUT THE BIG CALIFORNIA TREES.

A correspondent of the Philadelphia *Bulletin* thus descants upon the size and antiquity of some of the California big trees: "We have seen so many illusions. What we take for little hills a half mile away, we find on walking toward them are mountains twenty miles off—and so we go till the dazed traveller is almost ready to take off his clothes and swim, when really the ditch may he jumped across. So with the hig trees. "Not so large after all," several of the party said: but when the tape line showed a fair 100 feet round, there was no use in disputing any longer. Imagine a tree standing in one of your 30 feet streets and going right straight up, so that you could only see down the sidewalks on each side, and it will give a fair idea of the enormous size of those trees. There was no room to douht the size. Then I took to questioning the height, and here I think there is room to question whether they can claim to be the monarchs of the forests hy any great degree. I find no measurements in print of the sugar, yellow or balsam fir of these regions. Prof. Whitney had taken a few of the larger trees hy triangulation with an instrument. There are about 600 of these monsters, besides innumerable younger ones coming on, and most of them have heen singled out for special names. I took one that had been named after our celebrated college, "Harvard," and, hy the same process which gave me the figures already noted for the sugar and yellow pine, I had 249 feet as the height of this tree. I have been on the other side, but am now converted. The age has been computed from the annual rings of wood. But some trees make more than one circle of wood a year. We would not compute the age of a cottonwood by its annual rings—and so we said of these trees that probahly they made more than one circle of wood a year—and so said I. Now all our known coniferæ make but one circle. Why should this be an exception? Well, we wanted the exception to account for its enormous size, as against its snpposed age. Well, I found a comparatively young one which had fallen across the wagon road and had to be sawed across. A fire had just scorched the surface cut across and made the rings easy to count. I first estimated the age by the annual tiers of branches, which, however, are not so easy to count in the giant trees as in the true pines. I was sure by this examination, however, that the tree ought to he less than 200 years old. It had 189 rings and a diameter of four feet. This would give abont 1,300 years for the largest trees. Thus, though I am not yet persuaded that these trees were growing when the Saviour was on earth, as some have asserted, an age approaching this must he conceded.

ONTARIO FORESTS.

There are, according to Mr. Phipps, in his lately published report on the preserving and replanting of forests, four elevated plateaux or ridges in Ontario. The first of these is that which is known as the Oak Ridges, about thirty miles north of Toronto, and which passes round to the west, coming at Hamilton close to the lake, then going around the head of it and eying away in the Niagara peninsula. If this height of land had been retained in timber, he thinks the henefit to the Province would have heen incalculable. The second watershed is that which extends, with a slight curve to the north, from Kingston to Nippissing. To the east of it all streams flow into the Ottawa; to the west into Lake Ontario. Much of the land is still in the hands of the Government, and it would be well he suggests that large masses of forest were preserved along the whole line. Hundreds of thosands and even millions of acres of it might, indeed, well he left in forest, which would be a reservoir of moisture and ensure fertility to the whole of Eastern Ontario. The third watershed is the height of land of Western Ontario, the locality of the great Garafraxa swamp. Much of it might be reserved for timber. Its central point is one thousand feet ahove Lake Ontario, and from its sides rivers run into Georgian Bay and lakes Huron, Erie, and Ontario. The Blue Mountains, at the extreme north of the Ontario peninsula, extending from near Collingwood, past Owen Sonnd, to the north of promontory between Lake Huron and Georgian Bay, is the fourth Plateau, and, as much of it is still in the Government s hands it could he easily preserved in timber. The forest left standing on these ridges would be much more efficacious as storehouses of moisture than a larger amount scattered through the country.—*Montreal Gazette.*

LUMBERING IN THE ADIRONDACKS.

Much has been said and is being written—says a correspondent of the *Daily Advertiser*, Boston, who contributes the following interesting facts anent the lumbering operations of this most romantic section of country—of the desecration of the Adirondack region by the building of railroads, the despoilation of its forests by lumbermen, the pollution of its waters by saw mills and tanneries. If an enterprising man enters within its sacred groves he is immediately assailed, anathematized and spoken of as enemy to man and defrauder of posterity. However pertinent these warnings may be to other regions, they are wholly inapplicable to the Adirondack region, and I believe to most lumber regions, for reasons that are patent to all who can or will study the subject. Like all primeval forests, ours consists of trees of every age and size, from the tiny sapling up to the mature tree that has defied the storms of a century, and its more venerable congeners that are passing down the other slope of the anticlinal of life. Some having lived their allotted time, converted all their vital energies, died, and are falling *pari passu* to their mother earth, reticulating it with their prostrate forms in every state of decomposition.

At present, the only means of transporting lumber of this region is by floating it, in the round log, down the streams to mills located on one of the railroads that skirt every side of it, None but coniferous trees, pine, spruce and cedar, will float well, therefore none other are cut, and of these none of less than 27 to 30 inches in circumference are marketable. The result is that the lumberman takes, on the average, ten or fifteen of the largest and most mature trees from an acre. When railroads are built through the region, which will be done sooner or later, probably an equal number of deciduous (hard wood) trees will be cut for the market. Even in this case no more trees (and those the maturest) will be cut than a scientific forester would take out, had he no other view than the health, beauty and vigor of those that are left—young trees that are awaiting their turn. Is it not better that those mature trees should be utilized by the present generation of men, than that they should fall and decay uselessly, except to generations of trees that may revel in their elements a hundred or a thousand years hence? When this subject was discussed in the New York Legislature last winter, a trustworthy expert stated that if he could take the whole assembly over the Adirondack region in a balloon, not one in 50 of the members could tell where the lumbermen had cut all the saleable trees and where he had not. He was right. None but an expert, and one, too, that had viewed the premises before the despoliation, could tell; and then by only missing the black tops of the firs. In 10 years these will reappear, and the territory can be profitably lumbered again.

That fire may follow the woodsman's axe is possible, but not so probable, nor are its effects half so deplorable as that of a virgin forest. The conditions favorable to the former are more so for the latter. The largest and most destructive conflagrations have occurred where the green timber was still standing. When a fire is once started in a resinous group it does not wait for dry food, but leaps from conifer to conifer, and from base to top with electric speed, incinerating the living with the dead. That prince of explorers, Baron Nordenskiohl, in his "Voyage of the Vega," in speaking of the pine forests that he discovered on the Veniset, within the Artic circle, in Northern Siberia, says: "It is of enormous extent, a primeval forest nearly untouched by the axe, but in many places devasted by forest fires." The most thrilling and awful sight I ever witnessed was a grove of terebinthine trees on fire, lighted from a match that had lit my cigar. Almost instantaneously each was a writhing pyramid of flame. It was Shelley, I think, who called the lightning the laughter of the clouds. This seemed like the revelry of the demons, in which the four winds joined and outvoiced the roar of the ocean.

I have said that the logs are all floated down the stream. They go principally to the mills at Potsdam on the Raquette and Glen's Falls on the Hudson. The current and gravity take all but a small percentage to the latter, in the course of three years, mostly in the first year, while owing to the wide bays, narrow gorges and rocky rapids only a small percentage would ever reach the former without other aid. A drive of about 750,000 logs, all just 13 feet 8 inches long, belonging to half a dozen owners, sufficient to make 50,000,000 of manufactured lumber, passes down the Raquette annually occupying several months. That which passed this place in April has not reached Potsdam yet. The cutting and running of these logs is an industry of some magnitude, the picturesque and novel features will be interesting to those not familiar with the subject. About the time the sun crosses the line in the autumn, gangs varying from 25 to 75 stout men may be seen passing from her genial rays into the shade of the great wilderness, like flocks of hybernating birds and, like birds, they do not reappear into force until the sun has recrossed the line and the vernal season is at hand. They go in with dampers down and in silence, but come out with throttle open, jostling the air with the outpourings of their long pent-up exuberance. When they reach the territory from which they are to cut marketable trees, they build a log shanty, with two communicating apartments, covered with long spars hollowed out trough-like, with the axe, laid side by side, the space between them covered by others inverted and locked into them, making a water-proof, and, when calked on the inner side with moss, a warm roof. One apartment is used by the men, who sleep in berths or bunks built, in tiers of three, against the wall, of saplings fastened with withes, and filled with fragrant boughs for mattresses. These berths are made without the use of nails or tools save the axe. The other apartment is used for a storeroom and kitchen, where the food is cooked and served to the men, which is otherwise considered sacred to the uses of the women cooks, scullions, etc., and their families.

The most approved plan for these logging shanties is one inherited from early civilizations, but better adapted to the wants and health of its occupants than any modern conception. It is oblong, with an aperture some 6x12 feet in the centre of the roof, beneath which, on the earth, a fire fed by logs 8 to 10 feet in length is kept burning night and day, affording a genial heat and perfect ventilation, and around which the men, wet from melting snows and dripping trees, sit, dry their clothes, smoke their pipes, and while away the long evenings, and then turn into the surrounding bunks and sleep, without being assailed with fœtid air or unwholesome draughts, there being no other opening for light or air. The men in these camps are very rarely affected by the colds, coughs, sore throats and neuralgic pains that afflict almost constantly men in camps warmed by stoves and lighted by windows.

The most classical, best preserved and most superb specimen of the early style of construction, which these lowly huts follow in a very distant and feeble manner, is the Pantheon, in Rome,—

> The shrine of every saint, the temple of all gods,
> From Jove to Jesus.

Built 27 years before the birth of the latter, the opening in the dome (which is its only means of admitting light, or air) still bears the marks of sacrificial fires kindled to pagan gods almost 1,900 years ago. But I have wandered far from and far above my subject. Some of the logging camps on the Ottawa in Canada are so distant and inaccessible to wheeled vehicles that supplies for the autumn have to be hauled in on sleds the previous winter. This is rarely done on this side of the St. Lawrence. Late teams begin to run regularly after the men go in.

The logs are cut and placed on skidways, ready to be rolled on the sleds, in the autumn and early winter. As soon as there is sufficient snow, teams are sent in with large sleds that will carry from 15 to 20 good sized logs to the load, the roads are broken down and sprinkled with water, until they become, if the weather is favorable, sheets of glare ice. The logs are hauled on the river, where they remain until the ice breaks up in the spring. Every operator has his mark or brand registered in the county clerk's office. The die is cut upon the face of a hammer and indented upon both ends of the logs while they are on the skidways. They float at random, mixing with other logs, until they reach the assorting booms at the mills of their owners.

A gang of river drivers consists of a boss, a cook, chore boys and 40 to 60 men, who must be young and sinewy, as the work is rough and dangerous. They have to leap from log to log, and sometimes ride one ashore on the crest of a cataract or be carried over it; only experts can ride a log. It consists in balancing one's self on a log, keeping it from rolling and propelling it in the required direction, by a peculiar undulating and rocking movement, without paddle or other implement. Floating logs lodge upon projecting rocks and in narrow gorges, and pile upon one another until they form what are called jams, many feet high and extending back miles. A jam is not usually broken until the rear of the drive approaches, as the water thus held back helps the operation. It is a thrilling and sometimes fearful sight to see these jams broken and see the logs plunging down precipices of one hundred feet in as many rods, leaping, like a flying fish, entirely out of the watery abyss below, into the air, and bury themselves in the white foam of the next fall.

To return to the matter of preserving the sylvan beauties of the Adirondack region. The legislature of New York enacted a law at its last session restraining any further sale of the state lands, and I think I have shown that it is clearly not beneficial to the private owners of timber lands to despoil them, and self interest is a powerful motor in the conduct of men. But there is another, a meteorological reason, why this region is not likely to be shorn of its forests. No considerable area is ever deforested or (in the vernacular) "cleared," unless it is adaptable to agricultural uses. It has been demonstrated that in consequence of the long cold season of the Adirondacks, no land lying more than 1,500 feet above tide-water in that region can be cultivated profitably, or without frequent disaster. Nearly all the wilderness proper lies above this line; its finest and most interesting scenery, all its rock-riven and romantic passes, its affluence of lake and river systems, most of its summer and hygienic resorts, and its chief attractions lie above the line of profitable cultivation of the soil.

A LOST TIMBER SHIP.

Among the shipping casualties of the week, the most conspicuous and worthy of note is that of the abandonment of the Dublin timber ship Westminster, in the Atlantic Ocean, some 20 degrees of longitude westward of Cape Clear, on the 12th ult. It appears that the ship was caught in a heavy gale, increasing, it is said, to a hurricane on the 9th, when homeward bound with a cargo of timber from Quebec, and was struck by a heavy sea, which carried away the deck-houses, the boats, and the deckload, and also damaged the rudder, so as to render it useless; while up aloft the sails were blown out of the bolt ropes, after which the vessel became unmanageable, and apparently waterlogged, as the crew of 23 hands, under the command of Captain Morris, could find no place to occupy but the poop or the rigging, while the ship wallowed helplessly in the trough of the sea, which washed over her like a half-tide rock.

Five men, it seems, were at the steering gear when the sea first broke on board, and the second mate and several others were severely injured, apparently by the loose timber and wreckage flying about. This state of things continued until Thursday afternoon, and doubtless the sufferings of the men, especially those that were injured, must have been very great, from their want of shelter and being reduced to a biscuit a day and some lime juice, as they could not get at any fresh water or provisions. Fortunately, on Thursday afternoon the steamer Australian hove in sight, and her commander, observing the signals of distress flying on board the Westminster, bore down to her, and extricated all hands from their perilous and almost desperate condition, and brought them to Liverpool. The published accounts are very meagre, but there does not appear to have been any life lost, nor is mention made of any case likely to prove fatal among the injured men, so that it may be anticipated that all will recover and become again able seamen, whose lives were worth preserving for themselves and others. Nor is it found that the recollection of pains and perils past has any uncomfortable effect on the future lives and spirits of those who have suffered them if their health was not permanently damaged thereby. Neither are they discouraged from following their usual calling, and facing the same dangers whenever in the way of duty they chance to encounter them. They even obtain a sort of prestige among all their friends and acquaintances as heroes who have passed through a trying ordeal, and have a stirring tale of the sea to tell.

Now the Westminster was rather an old timber ship of 1,426 tons register, built at Quebec as long ago as 1867, and belonging to Mr. W. Murphy, of Dublin. But the trouble she fell into does not appear to have had anything to do with her age. There is no mention of her having sprung a leak, and the water that got into her seems to have come from above instead of below. In tearing away the deck-houses and cargo, rents would be made through which water bursting in huge masses over the decks would find its way below in tons at a time; and the pumps in such a case would have been useless, even had the crew been able to keep the main deck and work them. Here, therefore, was a case where the worst perils of the sea befell a timber ship, whose only merit was—and an immense one it turned out to be—that in the last extremity water could not sink her. Everything was lost but the lives of those she carried, and, whatever they suffered, they no doubt feel thankful that they are now safe in Liverpool, and that the old timber ship kept them up till succor arrived to redeem them from the jaws of death.

It is so much the fashion to deride wood built ships as something obsolete and out of date, that we are glad of an opportunity to show where they have an advantage over their iron competitors, and when it is a question of saving lives no one is indifferent to the incident.

In the last fatal collision in the Channel between two iron ships belonging to the same company, the Waitara was said to have sunk in four minutes after she was struck, and to have carried down with her twenty-six of the people on board, some of whom had not time to get on deck before she filled. A very shocking thought to follow out, which need not be done here, and which could not have happened to those on board the Westminster, which saved her people when all else was past saving, and gave them another chance for their lives.

It may be argued that with a Quebec timber cargo on board an iron ship would not sink, but that is very doubtful, and at all events she would be too near total immersion for any one to live on board of her if once the water got the better of her. Also the loss of the Westminster may be attributed to her deckload, which of course rendered her deeper in the water and less buoyant than she would have been without it, and it being summer time more would be carried that way, because bad weather is not anticipated to the same extent as in the wild winter months, and long dark nights, when more caution in loading is supposed to be exercised. But any way the deck load seems to have disappeared with the first heavy sea that broke on board, and in that way the ship was relieved of her superincumbent weight, and the people on board thereby found means to get at some food to avoid being washed off the wreck. All we profess to show in this brief allusion to the catastrophe of the Westminster is that timber ships wood laden are not liable to the same sudden destruction by accidents of the voyage as befall iron ships so often and so fatally if they come into collision with each other or are overpowered by stress of weather at sea.

In conclusion, we need only observe that too much praise can hardly be given to the captain of the steamer Australian (whose name by the by was not mentioned in the newspaper reports) for his prompt and efficient assistance in the hour of need to the crew of the Westminster. We so often hear of vessels hurrying past others in distress, like the Levite in the parable, that when we hear of a Good Samaritan at sea he ought to be made to feel by general acknowledgment that he has deserved well of his country.—*Timber Trades Journal.*

PROGRESS OF PAPER MAKING.

That the great bulk of paper now is not as good as it used to be is, I suppose, universally admitted. One reason is obvious. Far greater quantities are used every year ; the best paper is made from linen rag, and there is less linen rag available since the larger wear of calico and woolen goods. Ultiinately, of eourse, paper is now what it always was since first it was made from the fibers of the rush and papyrus. It was at first manipulated in no degree ; the outer peel was stripped off the rush and the strips were fastened together. Gradually it was discovered that the vegetable fiber, beaten and disintegrated into pulp, then allow under certain conditions to settle into a film and dried, was better. But the more the fibers can be disintegrated the better the paper ; and no process is so complete as the making it in the first place into another material, and allowing it to be worn and broken, as the completest mode of destroying its stringiness. Every kind of material has been tried, especially those on which St. Paul said it would not do to lay a foundation—"wood, hay, stubble"—the most common heing the coarse form of vegetable fiber known as Esparto grass, a species of broom. In Sweden, previous to 1866, a newspaper was printed for some considerable time on a paper made from horse-dung. It is not wholly fanciful that human wear and use has something to do with the excellence of paper, as with all other things of art. Mechanism is fatal to the higher and more spiritual qualities which make art. It has its great uses in cheapening and rendering plenteous much which is valuable and in a limited degree beatiful. But just as a chromo-lithograph is vile compared with an oil painting, just as a photograph of a picture compared with a beatiful print of it, so in exact proportion as in human work and human wear to bear on paper and printing you will have it, of its kind, surpremely good, or only tolerable. This brings us to another reason why old paper was better than all but the best to be now procured. It was all hand-made ; there was no machinery. The pest paper now made, such as Whatman's in England, or the best Dutch, which is all still made by hand, is better, or at least as good, as was ever made since the world was ; but the greater part of cheap paper is bad,—*Fortnightly Review.*

SUICIDAL BUSINESS.

When Norway lumber is sold for $8.25 per thousand, and the seller has paid $7 per thousand for the logs, how much money is there in the transaction for the manufacturer ? This query is suggested by the report from Alpena of a transaction of that character by O. E. Avery. Such childish business is not confined to Alpena, as we are aware of some of Saginaw river which will compare with it, and yet the "hears" in the lumber trade at many of the distributing centers are wondering why lumber dont come down, and persist in asserting that the manufacturers allow the dealers no chances for profit and are virtually driving them out of the trade. In regard to this Norway lumber foolishness and its influence on the white pine market, we have heretofore expressed ourself, and still maintain that it has been not alone detrimental, but destructive to the standing and demands for the coarser grades. There are many uses to which Norway can be applied, for which it is equally as good as pine, and in fact preferable to the coarser grades, and while men persist in slaughtering the former at ruinous rates, in order to get rid of it, they can only expect the influence of such folly to effect the latter. There has not been a time on the Saginaw river the present season when the finer run of lumber did not find ready sale at good prices, while the coarser grades have been slow to move ; and but for the almost unflinching attitude and persistence of the manufacturer, a break would have resulted months ago. This state of affairs is more directly traceable to the Norway lumber folly alluded to above, than to any or all other sources combined. Men who own Norway timber will display vastly more sound judgment by letting it stand than by putting it on the market in the shape of lumber, under present conditions, and owners thereof may rest content that Norway timber will in the not very distant future be excellent property to have, unless the suicidal policy of the present season is persisted in to its natural, inevitable and logieal conclusion.—*Lumberman's Gazette.*

DESTRUCTIVE FIRE.

OTTAWA, Aug. 8.—To-night the citizens on the street about ten oclock were startled by seeing the sky in the north-east suddenly becoming red and filled with smoke. A few minutes later the alarming sound of the Hull firebells told that the conflagration was on the Quebec side of the river, and going in the direction of the fire Gilmour's extensive steam saw mill, about a mile down the river from Hull, was scen in a mass of flames. The mill is situated on a point between the river and bay to the north, and is surrounded by large piling grounds, where millions of feet of lumber are piled. The fire was first discovered about 9:45, and a few seconds later covered the whole building. The water supply of the mill was at once brought into requisition, as was also the Hull steam fire engine, and the flames kept from spreading to the lumber piles. All attenpts to put the fire out were useless, and all efforts were put forth to confine to the building. By 11 o'clock the roof had fallen in, and the fire began to abate, while the piles were still untouched. The mill is the largest in the vicinity and run entirely by steam, and was rebuilt for the second time a few years ago. The value of the mill, machinery, approaches, etc.. burned will be in the neighbourhood of $100,000, and is believed to be covered to a great extent by insurance.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Aug. 2 :—

	1881.	1882.	1883.
Waney White Pine..	999,803	912,719	1,430,020
White Pine.....	2,870,985	3,211,300	1,396,359
Red Pine.....	653,759	561,414	131,191
Oak.....	1,721,513	643,069	999,071
Elm.....	782,845	441,893	242,609
Ash.....	276,420	156,158	147,133
Basswood	3,069	256	1,337
Butternut.....	937	1,960	835
Tamarac.....	6,706	1,859	2,765
Birch & Maple.....	123,856	262,179	136,494
Masts.....	—pcs	33 pcs	—pcs
Spars.....	— pcs	— pcs	— pcs
Std. Staves.....	186.3.0.14	237.3.2.15	366.8.3.9
W. I. Staves.....	301.6.0.25	604.1.0.0	371.7.1.21
Brl. Staves.....	.....	10.6.3.4	871.7.1.21

JAMES PATTON,
Quebec, Aug. 3. Supervisor of Cullers.

Old Building Material.

An extensive trade in second hand building material has been carried on uninterruptedly in this city for fifty years, and is largely supported by builders and joiners. The stone and brick of an old building is used in the construction of a new one, the lime-whitened bricks making the inside of the outer walls and the partitions, and the stone going into the foundations. But it is not generally known that the inside wood work is used again, frequently without radical alteration. Many builders prefer this old timber because it is thoroughly seasoned, having been defended from the weather and been subjected to the influences of a measurably even temperature for years. The richer woods which are admired for their color acquire mellower tones by age and become more valuable as the years pass. Everybody knows that furniture of mahogany and rosewood that outlived several generations is much handsomer than that made from new wood. But it has an added value as mere materal. An artical made from the old wood will retain integrity in all its joints ; its shrinking days are over. For the same reason timbering, wainscoting, and flooring of old buildings has an added value, although its selling price is less than that of the new material.

Masts and Spars.

A correspondent asks about the Quebec inspection of masts. An extract from the Act in regard to the culling and measuring of timber, masts, spars, etc., reads as follows: "Masts, bowsprits and red pine spars shall be sound, free from bad knots, rents and shakes, and the heart shall be visible in spots, at or near the partners." The following is given as to dimensions : "White pine masts, 23 inches and upwards at partners, shall be three feet in length to the inch in diameter : 22 inches, three feet in length to the inch in diameter, and two feet extreme length : 21 inches, three feet in length to the inch in diameter, and three feet extreme length : 20 inches and under, three feet in length to the inch in diameter, and four feet extreme length." The bend must not exceed six inches for every 70 feet, and in proportion for any greater length.

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Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

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As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O. ; W. EDGAR, Kilroy, P.O. ; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

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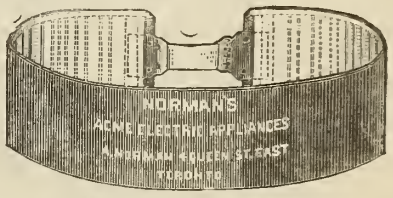

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EXTENSIVE PURCHASES.

A syndicate of Eau Claire and Chippewa Falls, (Wis.) lumbermen and capitalists has recently purchased extensive timber limits in the British Northwestern territory. The Syndicate is composed of the following gentlemen : J. G. Throp, O. H. Ingram, V. W. Bayless, W. A. Rust, H. C. Putman, I. K. Kerr, J. B. and H. M. Stocking, H. D. Davis and Daniel Dolena, F. Holman of Eau Claire, and Alex. McLaren, A. Bruce, Irvine & McDonald, and L. E. Waterman of Chippewa Falls.

The nine berths purchased by this strong combination cover an area equal to about 13 townships and are estimated to contain 250,000,000 feet of pine, spruce and cedar stumpage. The limit is situated in the province of Alberta, on the Bow river, and its tributaries near the eastern footholds of the Rocky Mountains and some 700 miles west of Winnipeg. Tho conditions of these grants of timber limits from the Dominion Government are thus stated :—

According to the regulations governing the granting of yearly licenses to cut timber on Dominion lands under section 52 of the Dominion lands act of 1879, provision is made for the licensee paying a ground rent $5 per square mile ; for requiring that within a month after the date of the order in council granting a timber berth, the person in whose favor it is passed must pay the rent for the year in advance, the rent to bear interest at the rate of 6 per cent. per annum from that date until the same is paid ; that when applications for licenses conflict, berths shall be laid off and described as the Minister of the Interior may direct, and tenders shall be invited for the same. Persons tendering are required to state the sum or bonus per square mile which they are willing to pay in addition to ground rent and a royalty of 5 per cent on the amount of the sales of all the products of the berth, and the limit is awarded to the person offering the highest bonus. Licensees are required to have in operation within a year from a date to be fixed in the license and to keep in operation for at least six months of each year of his holding, a saw mill capable of cutting daily at least 10,000 feet, board measure of lumber. It is further provided that when a licensee has complied with the conditions above enumerated, and where no portion of the berth is required for settlement or other public purpose, of which the Minister of the Interior is to be the judge, the license may be renewed for another year, subject to such revision of the annual rental and royalty to be paid therefor as may be fixed by the Governor in council.

Several valuable timber limits in the same general region have recently been secured by Minneapolis capitalists, and the prospects for a large return upon the investment is excellent.—*Minneapolis Tribune.*

PREPARED FLOORING IN ENGLAND.

There is considerable discussion in England over the matter of importing prepared flooring, the dressed and matched article, furnished in bulk, being a comparatively new proposition to saw out a bill of lumber to order from the raw material, in the shape of deals. Assortments are hardly dreamed of, in the sense that is involved in the stocks of the Chicago lumberman. Recently a sample cargo of prepared flooring from Archangel was received at London, and bought by some merchant of a speculative turn of mind. On account of the high freights which obtain it is doubted whether a trade of any extent can be built up in prepared flooring. It is stated that the sample cargoes of such stuff which arrive, are generally the first and the last. The trade does not tackle kindly to the scheme. It is thought that if the extra freight and insurance could be offset by a lower free-on-board price, there might be a chance for White sea floor boards in the English markets. But in that event it is feared that competition would result in hammering prices till the Norway article would crowd out the now candidate for favor, and there would be necessity for insuring a supply of prepared flooring, if any considerable business in it was attempted. With Swedish flooring it is different, and the conditions will doubtless foster something of a trade with Swedish and Gulf of Bothnia ports. In this connection arises the question as to how American drossed and matched flooring will fare in the English market, such exports having been sometime ago proposed. How many obstacles there are in the way has not yet developed but if the cost of yellow pine flooring, dressed and matched, is not excessive, when laid down across the water, it ought to compare favorably, in quality and service, with the foreign prepared article, since in what the preparation consists is a rather obscure proposition. The question of superior manufacture is an important one in this country, and doubtless is in England.—*Northwestern Lumberman.*

THE CHAUDIERE MILLS.

A visit on Tuesday, July 31st, to four out of five of the "Chaudiere Mills," by a representative of the *Free Press*, revealed the fact that lumbering is not near as brisk as it has been for a few years back. Shipping is very dull, owing mainly to the stagnant condition of the American market, and in a measure to the greenness of the lumber. Matters may look up, however, as the season advances.

Mr. Booth's shipping is considerably ahead of that of last year, though his cut is behind. He hopes, however, to catch up before the season is out. The capacity of Mr. Booth's mill is 300,000 feet per day, and at that rate the cut for the season would be in the vicinity of 50,000,000 feet. He employs about 450 men inside and out, about thirty span of horses, 100 waggons, and about 30 shipping carts. There is in the mill amongst other new machinery added this year, a gang saw with a capacity of three logs at a time, or about 800 a day. There are also an innumerable number of "twin," "slabbing," "edging" and other saws. There are eight gates in this mill—the largest number in any mill on the Ottawa.

Closely adjoining Mr. Booth's mill is that of Messrs. Perley & Pattee, employing about 100 men night and day. The capacity of this mill is about 300,000 feet, for the day and night watches. The machinery in this mill is somewhat similar to that in Mr. Booth's. Near the large mill is a small one which turns out laths, pickets for window fixtures and such small wares. There are upwards of 90,000 laths turned out per day. In this mill are employed about fifty-three men during the day watch, and about 23 during the night. The wages of all these hands range from $3 to $8.50 per week. At the beginning of the season Perley & Pattee had on hand about 200,000 logs, and of this number about one hundred and fifty thousand are yet in the river.

The next mill visited was that of Captain Young, in which about 200 men find employment during the day and night watches. The capacity of the mill is about 100,000 feet per 24 hours. The season was opened with about 150,000 logs, and of this number about 50,000 are cut. There are three gates in each mill. Captain Young's mill is the only mill lighted with electricity.

The mills (2) of Messrs. Bronson & Weston are second to none on the Ottawa. The capacity of the two is upwards of 400,000 feet per day (24 hours.) Between 450 and 500 hands are employed. About 300,000 logs were taken out last winter, and of this number about one-half are cut. All the cuttings, edgings and slabs are run through another part of the mill, and come out either as laths, pickets, or boxing stuff. Thus scarcely anything else but the bark and the sawdust is wasted.

Mr. Eddy's and Mr. Rochester's mills will be referred to another time.

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* says :—The aspect of affairs in Sweden shows at length that the modifications made by extensive exporters in their prices reported a few weeks ago have been taken full advantage of by buyers in Great Britain, and have have resulted in important transactions to London and other large ports, of which the somewhat heavy shipments by steam at present going forward bears witness. At the present moment exporters have relieved themselves of a good portion of their stock that had previously hung fire, are a degree stiffer in their quotations, and the general opinion seems to be that the worst is past. The reports from the principal consuming districts, especially in England, are more favorable, while it is now seen that the aggregate production of the season must be considerably less than last year, even under the most favorable circumstances.

Notwithstanding the comparatively heavy shipments now taking place, all that I have been able to gather in respect to the probable export of the coming autumn leads me to the conclusion that the same will be decidedly less than last year, and that the total shipment of sawn and planed wood from Sweden in 1883 will, in all probability, be less by 50,000 standards than those of 1882, unless some of the smaller firms adopt the doubtful expedient of sending consignments.

A HILL OF TREES.

It is comparatively easy to render prairie farms beautiful by the judicious planting of forest and ornamental trees. A correspondent of the Country Gentleman writes : A friend of mine moved from the picturesque hills and lovely woods of western New York to a prairie country, treeless and level. Although at first he duly applauded his new home for its practical utility in being so level, and blessed his luck in having no stumps to pull, yet its monotony became unbearably wearisome, and he was homesick for a sight of rugged but beautiful Cattaraugus. Trees he had, for his first care was to plant windbreaks, and a ten-acre forest of soft maple and cotton woods ; but hills were missing. Finally he told his wife that he was "going to make a hill at least 100 feet high," about 1,000 feet in front of the house. When I saw his hill it was nearly 75 feet high, and one of the most beautiful sights I ever saw. This is the way it was made : In the center of a circular land about 200 feet in diameter he set a cotton-wood tree, and 20 feet away a circle of six cotton-wood trees. The centre tree was much larger and thriftier than the circle. Twenty feet distant was another circle—this one of willows, set 15 feet apart. Then followed catalpa, ailanthus, osage orange, and holly. These outer circles were closer, and the trees, being of smaller kinds, were set closer. By cultivation and manuring he endeavored incite the central trees to a more luxuriant growth than the outer ones, and has succeeded in a remarkable degree. The result is a solid green hill of foliage that soon will be one hundred feet high in the center, and slopes down to about ten feet at the base. My friend tells me that he does not think he made the best possible selection of varieties, but could do better now in making a uniform grade. My friend is "building" another hill on a modification of this principle. This is to be an evergreen hill, and for the place of honor he has a white pine surrounded by spruces, and the varieties graded as to size to the edge. To secure a greater hill appearance he allows five years to elapse between the planting of the different circles, so that when the last circle is set the central tree will be twenty-five years old.

PRESERVED WOOD.

We have from time to time called attention to the different methods of preserving wood from decay and from insect enemies, and urged that the processes in use abroad should give equally good results in this country. Though at different times considerable quantities of timber have been treated in this country by various methods the use has been somewhat spasmodic, and but little has been kept until lately in the shape of recorded results.

Lately, however, the American Society of Engineers has agitated the matter, and the results of their investigations have already been presented in our columns. Their exhibit at the railway exposition of wood and timber, both treated and natural, as exposed to different kinds of service for greater or less periods, is most interesting. It will be beneficial in directing the attention of those interested in the use of timber to the advantages of systematic treatment wherever there is to be exposure to the elements. The four methods of treatment represented creosoting, burnettizing, kyanizing and the Thilmany process. The first, as is shown by the name, consists in using the heavy oils distilled from wood ; the second in using chloride of zinc ; the third is the chloride of mercury process, while in the fourth system two salts are used, one being of zinc or copper and the other of barium.

The most systematic exhibit in this collection is that from the works of the locks and canals on the Merrimac river, and represents the kyanizing process. The samples of timber displayed are of twelve different kinds, and each kind is shown as treated, and also in the natural state. The pieces were all treated alike as regards exposure, and the samples exhibited were taken near the ground line, where the strongest action of the weather would be shown. The time of the experiment was twenty years which is certainly long enough to decide the matter in the most satisfactory manner. It certainly has in this case, as in every instance the treated wood has lasted remarkably well, while in every specimen the natural wood is decayed so as to crumble almost at a touch. The effect of the preserving material has been clearly shown in the sample of poplar which after twenty years seems in as good, if not better, shape than some of the harder woods. If it is generally so susceptible to treatment it will greatly raise it in the estimation of engineers from its present low condition. The samples of kyanized timber from Fort Ontario after an exposure of forty years, are also interesting.

The exhibits of the other methods of wood preserving are valuable, though not showing such marked contrasts as that which we have just described, but all of them seem to show very good results under different circumstances and for long periods of time. The creosoted ties of fir from the English roads may be considered as good samples of that class of treatment.

The double salts methods, though newer before the public gives promise of good record.

A curious feature is an exhibit of portions of ties from the line of the Union Pacific, where the natural soil is of such character as to preserve the wood. A glance, however, at the analysis of this soil, which is attached to the samples, would seem to show "salts" enough to preserve anything.—*Railway Review.*

H. M. Bruce recently cut a spruce tree, in Stowe, Vt., which made three logs 12 feet in length and measured 1,400 cubic feet, the butt log containing over 500.

E. Hall, of Detroit, is building a dam on the Tobacco river north of Clare, in order to run about 13,000,000 feet of Mr. Hall's logs which are hung up in that stream.

The *Lumberman's Gazette* of August the 1st, says :—The recent floods have destroyed numerous dams in this state, on which the only hope of securing logs from many of the tributary streams depended. Five dams on Hope Creek, a tributary to the Au Gres, went out last week, and over ten million feet of logs are thereby hung up high and dry. Some of our Bay City mill men will by this circumstance be considerably short in their expected log crop. Four dams on the Cedar were also carried away last week. It seems that the elements are persistent in their conspiracy to defeat any effort to overstock the lumber market on the Saginaw river.

The *Timber Trades Journal* of July 21, says : The torrent of wood goods from the Scandinavian and Finnish ports has abated this week and made room for our early North American fleet, as out of the sixty-six vessels arrived in London with timber about twenty are from the river and Gulf of St. Lawrence. But even with these the total arrivals for the week is 12 short of the number of either of the two preceding weeks, and under the circumstances it can hardly be considered an excessive supply. It is however numerically in excess of the corresponding week of last year by nineteen vessels. The difference occurs chiefly in the North American arrivals, only five being in the list o that from Canadian waters.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

Chips.

A STEAM cooperage on the Scotch system has been built at Uddevalla by Swedish capitalists, and the manufacture is superintended hy Scotch coopers. The casks turned out are superior to the hand-made, and, although expensive, are likely to find a good demand.

WORKMEN have discovered a suhterranean forest seven feet helow the surface of the ground near the mouth of Savage river, in Chazy, Clinton county. Many of the trees are declared to be in an admirable state of preservation. One of them is a large oak over 40 feet in length.

MAKING of charcoal is a considerable industry a long the eastern division of the Flint & Pere Marquette railroad, in Michigan. Between East Saginaw and Holly these are a number of kilns. There are a few on the Otter Lake Branch, and between Wayne Junction and Monroe there ahout fifty kilns.

LEWIS PRAY, of Portland,Me., who turns out carriage and sleigh work, makes the statement that hickory can he raised in Maine from the seed in 15 years, to the size required for carriage stock, and believes such culture would be profitable. The older trees are not so fine grained and valuable as the younger ones.

THE quantity of logs cut and floated down the provincial streams during the past season is estimated by a prominent New Brunswick lumherman as 345,000,000 feet. This includes the timber cut in Northern Maine, which floats into New Brunswick River. The amount cut on the Aroostook River is given at 65,000,000 and on the Upper St. John as 45,000,000 feet.

Mr. McAllister's drive of logs on Snake River has heen abandoned owing to the impossibility of getting them through the enormous growth of weeds. The drive consisted of 40,000 logs and some dimension timber, and extends for eight miles along the river. It will prohahly remain there until next spring. Mr, McAllister had accepted several contracts for the supply of lumher, which he will now be unahle to fill.

THE Indianapolis, Ind., Wooden Dish Company has perfected a machine, which takes the veneer from the mill, cuts out the hlank, shapes and scores it, folds it up, makes, drives and clinches the wire staples, and throws the dishes off complete, at the rate of one a second. The company's work's, hurned last March, have been rebuilt, and $12,000 worth of new machinery has been purchased. The works will start up August 15, and have a capacity of 200,000 per day.

THE *Lumberman's Gazette* says :—Opinions of great men sometimes prove no hetter than those of the most ordinary individuals. Twenty-four hours before the break of the great jam of nearly one hundred million feet of logs at Grand Rapids, Mayor Watson was quoted by the press as saying that for one thousand dollars he would insure the safety of the railroad hridge to the extent of twenty-five thousand dollars. That structure, was carried away with others standing in the way of the rushing, roaring flood of logs, and great damage followed.

THE *Mining and Scientific Press* says :—Don't over drive your machinery. The policy of driving our machinery is a losing one. When normal speed is on, and the machinery is running, all is well, but the moment the speed is increased beyond the natural hearing capacity, something must give way. It may not be at once, and the unnatural speeding may go on very well for a term, but the machine is wearing away faster than it should, and some of these days the man who runs it will be reminded of the old deacon's 'one-hoss shay.'

A LOFTY mountain tramway is to he constructed up the famous Pike's Peak in the Rocky Mountains, Colerado, reaching to an altitude of 14,200 feet. It will he divided into three sections, the first worked by an engine at the lower end, the second hy water power utilized on the mountain side through a turhine wheel, and the third by an engine erected on the summit of the Peak. The supports will be made of trees about 24 feet high, on which a thick wire cahle will be fastened. At intervals a large covered arm chair holding two persons, will be suspended about eight feet from the ground.

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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co, 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., AUG. 15, 1883.

CHAUNCEY CARPENTER, a saw mill owner in Victoria, B. C., has absconded, leaving liabilities to the amount of $40,000. It is believed that he carried $20,000 away with him.

THE American Lumber Company is building a tug to tow logs up stream, on the Taquamenon river to the company's mill at Dollarville, upper Michigan peninsula.

THE pine forest along the Adriatic at Ravenna, Italy, celebrated by Dante and Byron, and which furnished the shipyards of Rome and Venice, is to be cut down, because an excavation for a railroad has so drained the soil that the trees have died.

BUSH fires have spread over Victoria, B. C., and everywhere flames and smoke reign supreme. The island is similarly affected. The sky is filled with smoke so dense that the sun's rays cannot break through it. There has been no rain for nearly three months.

THE Ottawa *Citizen* of August 4th says:—The American barge Marquis of Lorne took the unusually large load of 240,000 feet of lumber to-day from McClymont & Co.'s millyard, New Edinburgh, to New York. The barge James G. Blaine took a similar load from the same place to Whitehall, N. Y., at the same time.

THE Winnipeg *Commercial* of July 31, says: There has been no change in the lumber market since last week. The mills are busily engaged working up last winter's cut of logs, and the amount of lumber turned out will be very large, more than the demand will require. The old table of rates still holds, but cash customers can get a considerable reduction.

THE Chicago *Lumber Trades Journal* says:—From the reports of our lumber capitalists seeking the Canadian Northwest on speculative tours it is quite presumable that that region of timber lands will experience a boom. Explorations are being made which, from advices, will undoubtedly culminate in very extensive purchases by American buyers; in fact such has been the result in several instances.

SEVERAL cargoes of lumber have lately been shipped from Manistique, Mich., to eastern markets. There is a considerable accumulation of lumber at that point.

WE would call the attention of our readers to the important auction sale of valuable timber limits to be held at Ottawa on August 28th, the particulars of which may be found in our advertising columns.

A SIMPLE device for gauging weather or clap boards has been patented by Mr. J. C. McEwen, of Lochloosa, Fla. The device may be readily set for indicating the inclination and set for the board, and it is readily adjustable for boards of different widths. This implement may be provided with hooks upon which may be hung the various tools used by the workmen, which will thereby be always readily at hand convenient for use.

A PULP mill at Yarmouth, Me., which consumes 10,000 cords of poplar annually, which is equivalent to 1,536,000 feet board measure, is having 1,800 cords furnished by James Irish, of Hartford. The pulp wood was cut on Swift and Ellis rivers, and is peeled before going into the water. The entire lot will be floated down the Androscoggin to Lewiston, where it is taken out at the rate of 50 cords per day, and transported by rail to Yarmouth.

THE *Lumber World* thinks the forestry associations should turn their attention to cyclones, which appear to have joined the ranks of the "denuders." A cyclone in Michigan, recently, leveled acres of timber, making so clean a sweep that hardly a tree was left standing. An excellent idea of the irresistible power of these storms may be gathered from the report from Wisconsin of the trunk of an oak two feet in diameter torn in two, and a hickory twisted into splinters.

THE *Timber Trades Journal* of July 21, says:—As far as the Quebec trade is concerned, although a considerable spring fleet is handy to our shores, we do not think the shipments this season will be very large. The market here offers but little encouragement to shippers, and very few cargoes we believe will be shipped on speculation. Spruce is said to be in somewhat better demand at Quebec, but the stocks of lower port are known to be large, and importers here will be in no hurry to advance on their previous offer as long as they think they have the whip hand.

THE *Railway Review* gives the following statistics as to the annual supply of cross ties required for the railways in the United States: There are about 119,000 miles of railway in operation in that country at the present time, which have an average of 2,816 cross ties per mile of track, making a total of 335,104,000 cross ties now in use. Allowing 160 as the average yield per acre of woodland, the number now in use upon the railways in the United States represents the stumpage of 2,094,400 acres of land, and during the next six years this amount of timber land will be levied upon to renew the existing 335,104,000 cross ties at a cost of $187,552,000."

MR. ERASTUS HIBBARD, of South Barre, N. Y., has recently patented a machine for finishing staves, so that when the barrel or tub is set up and trussed it is ready to receive the head without the use of the usual hand tools for leveling, chamfering, and crozing. Further, the object is to give uniform depth of croze in barrels having staves of varying thickness, instead of making the croze too deep in thin staves and too shallow in thick ones, as is generally the case in hand work. A revolving mandrel carries the tools, and a feed bed with travelling belts carries the staves. The parts are made adjustable and self-adjustiug, according to the thickness of stave.

IRREGULAR DEALS.

To the Editor of the Canada Lumberman.

DEAR SIR,—We notice a great many deals sawn by our circular saw to be ⅛ of an inch thicker one end than the other. The thickest end being where the saw enters the log. Can you or any of your numerous readers give us the reason of it?

Yours truly,

River Ouelle, P. Q. A SUBSCRIBER.

WILL IT PAY TO PRESERVE AND REPLANT OUR FORESTS?

Now that more prominence is being given to the subject of forestry, there is no doubt there will be many asking: Will it pay to preserve and replant our forests?

As this is a practical and pertinent question; is, in fact, the key stone to the solution of what is and what is not the duty of the Provincial Government in the premises, let us briefly state a few of the facts given in Mr. Phipps' recent pamphlet bearing upon this particular point.

In Hanover the Government control 600,000 acres, the maintenance of which costs them about $650,000 annually, while the annual revenue averages about $1,500,000, leaving a profit of about $850,000 per annum, or about $1.50 per acre per annum.

In Prussia there are 20,000,000 acres under forest. One half of this is private property. The remainder is owned by the state, and commercial and ecclesiastical corporations and yields an income of about $14,000,000 yearly against an expenditure of $7,500,000, leaving as net income about 65 cents per acre.

In Saxony there are nearly 400,000 acres worked at an expense of $500,000 per annum, and yielding a revenue of $1,750,000, or a net yearly rental of $3 per acre per annum.

Bavaria has 3,000,000 acres under forest, the returns from which, after paying all expenses (which includes the replanting of 30,000 acres annually), is about $1.50 per acre per annum.

In Austria they have less than 2,000,000 acres of productive forest, and little attention having been paid to the subject in that country until recently, the net income is only a little over twenty-five cents per acre per annum.

These are the only figures given as to forests which have long been under government supervision, and managed with a view to their maintenance and the obtaining of a permanent revenue therefrom, but they certainly must be admitted as going to support the soundness of the views of those who are urging upon the Provincial authorities the propriety of adopting efficient measures for the maintenance and replanting of those public lands, which from their nature and situation are better adapted for the growth of timber than for tillage.

FORESTRY.

Dr. Nelles, of Victoria University, writes thus to the editor of the *Globe*:—

SIR,—I have read with very great satisfaction the pamphlet by Mr. R. W. Phipps, "On the Necessity of Preserving and Replanting Forests." It purports to have been prepared "at the instance of the Government of Ontario," and is full of the most valuable information on the important subject on which it treats, and it is high time that both our Legislature and the people at large were aroused to act with more intelligence and energy in reference to this great public interest. The old adage, "What is everybody's business is nobody's," seems to have been once more illustrated in this matter. Let us hope that a wiser policy is likely to prevail in the future, and that not only the Province of Ontario, but the entire Dominion will seek to remedy as speedily as possible the carelessness and mistakes of the past.

Mr. Phipps has evidently put forth a great deal of research, and has confirmed his own extensive experience by collecting from various recent and trustworthy sources a mass of information such as the general public sorely needs, which it could not otherwise have easily obtained. In fact, it is one of those cases in which it is not only necessary to provide the information, but to enforce its application by Governmental authority. In this matter, as in educational and sanitary measures, we encounter not only gross ignorance, but indolence, apathy, and selfishness, which together make up a stubborn *vis inertia* that only an enlightened and public-spirited Legislature can overcome. As we read Mr. Phipps' well written pages we get a vivid and rather melancholy view of the power of popular stupidity, and feel that there are blunders worse than crimes, or at least equal to crimes in their evil effect. Some persons may consider this strong language to use in speaking about "trees," but the language will not be deemed too strong by those who have carefully weighed the facts and reasonings embodied in this most excellent report. For it is not, as some may imagine, merely a question of firewood and lumber. There are involved as well the important matters of climate, of soil, of comfort, of beauty, and of health, in fact the great agricultural and general interests of the people for centuries to come. Nor let any one foolishly suppose that it is entirely a providential affair which only He who made the forests can control. Those who read the pages of this pamphlet will learn that God has put us in trust with our forests much in the same way as that in which He has given us our cattle, our harvests, and our orchards. We may preserve or destroy, and within limits reproduce, the one as well as the other. And it is not too much to say that the former are almost as indispensable as the latter.

The Hon. S. C. Wood, the late Treasurer Ontario, deserves well of his country for having introduced his timely measure to encourage tree planting. That Act relates, I believe, entirely to ornamental trees, but it is worth considering whether some legislative enactment could not wisely be adopted to encourage the planting of trees in certain districts upon a larger scale. The practice of other countries, as shown by Mr. Phipps, should at least lead to some investigation on the part of our legislators, and the report now published may perhaps be intended as a step in that direction. It is well that so much space is given in the report to this branch of the subject, for, contrary to the popular notion, it does seem possible to rear a harvest of trees, and within such a limited time that he who plants the acorns may himself build a house or a ship with the oaks they produce. But if it be necessary that the father should plant and the children reap, it will only be another example of the great law of life. Numerous extracts from other reports and communications are furnished by Mr. Phipps to show the ease, rapidity, and success with which groves and forests of trees of various kinds have been produced in Canada and elsewhere. I have not space for lengthy quotations here, but will cite one passage, and trust the public journals in noticing this report will make other selections. The following extract is from the pen of Hon. J. Sterling Morton, of Eastern Nebraska:—

"Twenty years ago cordwood sold in Nebraska City for seven or eight and sometimes ten dollars a cord, and that, too, when her population was not one-fifth of what it is now; and, notwithstanding the demand for fuel is at least ten times greater than in 1857, it is a fact that good merchantable wood can be bought in our streets for from $3.50 to $4.00 per cord. The reason of this is simply from the fact that the natural groves have been protected from fire, and the artificial groves are turning out an abundance of good wood, such as the necessities of the country demand for fuel. It will agreeably surprise anyone not acquainted with the fact to know the amount of timber one acre of land will produce in the course of ten years. Mr. Richard Justice, who came here (Otoe county) in 1857, and planted about ten acres of cottonwood in 1859, has one or two outhouses built from hewed logs taken from that grove, and the family have all the fuel they need. Hundreds of such cases might be mentioned throughout the eastern portion of the State, did space permit."

On the whole the Government of Ontario is much to be commended for procuring and publishing the information contained in this document, and both the Government and the general public are to be congratulated on having found so competent a man to write and compile what is here published. The accomplished author I have not the pleasure of knowing, but it is seldom one finds in our "blue books" (as they are called) so much practical experience and scientific knowledge combined with literary taste and excellence of style. I have not attempted to give a minute analysis or extended review of the report, but I am deeply convinced of the importance of the subject which it dis-

cusses, and it is a pleasure to do anything that may help to bring it under public attention, though it be only by penning this hurried and imperfect notice.

S. S. NELLES.

Victoria University, Cobourg, Aug. 6, 1883.

WHAT IS TO BE DONE WITH THE SAW-DUST?

The following note of inquiry was recently sent to one of our regular contributors by one of our readers :

MARBLETOWN, N. Y., May, 1883.

We are running a small steam saw mill, cutting about 10,000 feet of lumber a day. We make plenty of steam by using the slabs made and some sawdust. But we cannot use all the dust and in very dry summer weather are afraid to use it at all, for fear of fire. Consequently it accumulates rapidly and is seriously in the way, requiring the labor of several men to wheel it off and burn it, at a very considerable expense to us. As we know of no consulting engineer in this vicinity, after reading your article in *The Millstone*, we write to you for advice. Please write and tell us what to do. Make your charge and we will pay it, but do not give us any guess work. We want a guaranteed plan, and are willing to pay for it.

Very truly yours,——.

Answer : What to do with the sawdust has bothered more than our inquiring reader. In the large Wisconsin mills the surplus was formerly dumped into the stream near at hand. When that was forbidden by law large brick kilns or furnaces were made, conveyors were run to them and the surplus not needed for steam making was burned up. This, it is believed, is the general custom now. If any better disposition is made of it that any reader of this periodical knows of, he would do a favor by letting the public know through these columns. More sawdust and less slabs may be burned by making a better draft. This can be done by turning the exhaust steam into the smoke-stack, low down, or by increasing the height of the stack. Increased risk by fire by increased draft can be obviated by using a locomotive wire screening over the top of the stack, which should flare out funnel shape. This screen and the moisture from the escaped steam, will avert all danger from flying live sparks, and allow sawdust to be burned at all seasons, no matter how dry the weather may be.

But no other disposition of the surplus sawdust that may accumulate after all, is better than that made by the great mills of the north. A conveyor can carry this surplus a considerable distance from the mill by machinery, and the kiln can be built up close and tight, so a constant fire can be kept up, only requiring a little watching and care by the men employed outside of the mill.—*J. F. Tallant, in Millstone.*

New Zealand Forests.

The forests of New Zealand cover an area of not less than 20,000,000 acres. The forests on the crown lands alone are estimated at 10,000,000 acres ; about 5,000,000 acres are the private property of the white or European population, and the remainder is owned by the Marori or native inhabitants. The kauri pine, found only in the province of Aukland, is on of most valuable trees in the colony. It often grows to a hight of 200 feet and measures 12 to 30 feet in circumference. The annual output of Kauri timber is about 110,000,000 feet. Another valuable tree is the kahikatea, a species of pine. The totara, a hard, close-grained wood, is used a great deal, and lately it has been found to be very serviceable for wharf piles and telegraph poles. There are many other varieties of valuable wood in the colony and the forests are so vast that they must yield enormous wealth to the colony in the futurer

A Plucky Damsel.

A young lady, Miss Kate McDarby, recently ran the Calumet slides and chute on a crib. Only one lady has ever been known to do this before. Not a few river men have also been know to show the white feather at this place. Miss McDarby however was not in the least frightened and after she had passed through it, wanted to run it again.

Saw Mill Burned,

MIDLAND, Aug. 10.—The fine new mill belonging to the British Canadian Lumber Company here was totally destroyed by fire this evening. The yard was full of dry and green lumber, which is at present (9 p.m.) burning, with no hope of saving any. Loss fully $100,000. Particulars of the insurance cannot be ascertained to-night.

ROCK ELM WANTED.

A Few Car Loads of good ROCK ELM, cut into 1½, 2, 2½ and 3 inches thick, 12ft. length prefered.

DUFRESNE & JODOIN,
Lumber Dealers,
6L12 496, St. Joseph Street, Montreal

A RARE CHANCE!

Valuable Steam Saw-Mill

FOR SALE.

The Waba Creek Steam Saw Mills, situated on the Madawaska River, one mile from Arnprior. Capacity of Mill, Fifty Thousand Feet of Lumber per Eleven hours. Capacity of Booming Pond, Thirty Thousand Logs. Has Sidings through piling Grounds connected with main line of Canada Pacific Railway The Mill is in good repair, having only run a short time, and is well found in all appliances required to run it to the above capacity. There is also a good water power connected with it from the Waba Creek, and good stabling, Barn, Boarding House, and other buildings. For information, price and terms, apply to John Robertson, 581, Seigneurs Street, Montreal, or to James McCuan, Arnprior, who will show intending purchasers the whole property, or to

J. T. LAMBERT,
6L11 Lumber Broker, 110 Wellington St., Ottawa.

How Many Miles Do You Drive!

The
ODOMETER
Will Tell.

This instrument is no larger than a watch. It tells the exact number of miles driven to the 1-100th part of a mile ; counts up to 1,000 miles ; water and dust tight ; always in order ; saves horses from being over-driven ; s easily attached to the wheel of a **Buggy, Carriage, Sulky, Waggon, Road Cart, Sulky Plough, Reaper, Mower,** or other vehicle. Invaluable to LIVERYMEN, PLEASURE DRIVERS, PHYSICIANS, FARMERS, SURVEYORS, DRAYMEN, EXPRESSMEN, STAGE OWNERS, &c. Price only **$5.00** each, one-third the price of any other Odometer. When ordering give diameter of the wheel. Sent by mail on receipt of price, post paid. Address

McDONNELL ODOMETER CO.,
2 North La Salle St., Chicago.
☞Send for Circular. 16L10

SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.

Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.

☞Canada Pacific Railway now running through part of the property.

For full particulars address :—

WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy ; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

F. E. DIXON & CO.

MANUFACTURERS OF

STAR RIVET
LEATHER BELTING
70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

WATER POWER
TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND
1d86 LAKEFIELD, ONT. w15L9

AUCTION SALE
—OF—
VALUABLE
Timber Limits

I will offer for sale by Public Auction, on account of whom it may concern, at the Grand Union Hotel, in the CITY OF OTTAWA, on TUESDAY, the 28th day of AUGUST next, at the hour of 2.30 o'clock in the afternoon, Timber Limits as follows :—

PARCEL No. 1.

License—					
No. 389	Kippewa,	Season	1882-83,	50	sq. miles.
390	do	do	do	40	do
391	do	do	do	20	do
398	do	do	do	6	do
399	do	do	do	50	do
397	Temiscamingue,		do	50	do
385	do	do	do	6	do
406,	River Ottawa,		do	25	do
386	do	do	do	67¾	do
400,	Coulonge & B River		do	7	do

PARCEL No. 2.

401,	North of River Coulonge			30	do
402	do	do	do	30	do
403	do	do	do	30	do
404	do	do	do	30	do
405	do	do	do	30	do

PARCEL No. 3.

387,	River Ottawa,		do	17	do
388	do	do	do	43	do
392,	River Coulonge,		do	50	do
392	do	do	do	50	do

PARCEL No. 4.

Upper Ottawa,	License 1873-4,		No 431,	containing	Miles. 58¾
do	do	do	532	do	49½
do	do	do	533	do	52
do	do	do	534	do	47¾
do	do	do	535	do	32½
do	do	do	537	do	46½
do	do	do	537	do	50¾
do	do	do	538	do	47½

PARCEL No. 5.

do	do	do	507	do	50
do	do	do	508	do	47½
do	do	do	509	do	40
do	do	do	510	do	28
do	do	do	511	do	26

Also half interest in Licenses Nos. 343 and 344, season 1882-83, 87 square miles.

Timber cut on Kippewa Limits was sold in 1880, 30c ; 1881, 32c , and 1882, 32c. There is also a farm in connection with the limits which will be sold with a quantity of Clear Mess Pork, Flour, Oats, Beans, Hay, Horses and other rigging requisite for shantying.

TERMS—Cash, or one-third cash, one-third in 6 months and one-third in 12 months, with interest at 6 per cent., approved notes. For further particulars apply to the Crown Timber Agent, Ottawa, or to

R. C. W. MacCUAIG,
3L14 Auctioneer.

Extensive Sale
OF VALUABLE
TIMBER LIMITS

For the purpose of determining the partnership existing between the undersigned, they will offer for sale by PUBLIC AUCTION at the RUSSELL HOUSE, in the CITY OF OTTAWA, on WEDNESDAY, the 12th day of SEPTEMBER next, at TWO o'clock in the afternoon (unless sooner disposed of by private sale), the following Valuable Timber Limits, or Licenses to cut Timber, in the Provinces of Quebec and Ontario :—

PARCEL I,

Province of Quebec.

License						
No. 85	of 1881-82,	River	Maganicippi,	Area	25	sq. miles.
" 86	do	do	do	do	50	do
" 87	do	do	do	do	50	do
" 88	do	do	do	do	50	do
" 89	do	do	do	do	50	do
" 90	do	do	do	do	30	do
" 91	do	do	do	do	17½	do
" 92	do	do	do	do	26	do
" 93	do	Ottawa&Maganicippi,		do	50	do

Total area ....348½ sq. miles

PARCEL II,

Province of Ontario.

No. 129	of 1882-83,	River Ottawa,	Area	22½	sq. miles
" 130	do	do	do	57	do

Total area ....79½ sq. miles.

☞Term s and conditions made known at time of sale Further information may be obtained on application to JAMES ADAM, ESQ , Manager St. Lawrence Docks, Quebec, JOHN POUPORE, ESQ , Crown Timber Office, Ottawa, JOHN WALKER, ESQ., Manager Quebec Bank, Toronto, or at the office of the undersigned in Pembroke.

2L15 A. & P. WHITE.

DIEU ET MON DROIT

Notice to Contractors.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Post Office, Barrie. Ont," will be received at this office until TUESDAY, the 7th of AUGUST next, inclusive, for the erection of

POST OFFICE
—AT—
BARRIE, ONT.

Plans and specifications can be seen at the Department of Public Works, Ottawa, and at the office of Messrs. Kennedy, McVittie & Holland, Architects, Barrie, on and after TUESDAY, the 24th July next.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, made payable to the order of the Honorable the Minister of Public Works, *equal to five per cent.* of the amount of the tender, which will be forfeited if the party tendering decline to enter into contract when called on to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The department will not be bound to accept the lowest or any tender.

By order,

F. H. ENNIS,
Secretary.

Department of Public Works,
Ottawa, July, 1883.

1L15

FORESTS AND THEIR MANAGEMENT.

We take the following from Mr. R. W. Phipps report to the Ontario Government:

To obtain knowledge on this head, no better source of instruction is available than the extensive report made on the subject by Captain Walker, a gentleman who passed nine months on the continent, by direction of the European Government, for that purpose. I cannot copy his voluminous report, but will give a short review of what refers to each country visited, and anything likely to be useful for our purposes here in Canada. The Captain first visits Hanover, describing the system in which territory to some extent describes all, for he tells us that the system there may be considered as typical. He gives then, the administration there, and a brief statistical record of the others, except in those points where they decidedly differ. Now, as to Hanover.

Hanover.

Its forests under State management amount to 900,000 acres. Some are Government, some Church, some belong to municipalities or communes. Government manages the forests by officers appointed, while the community pay four cents per acre towards the pay of the officers. The method appears to be that of giving the owners as much wood, pasture, or litter for manure, as their original right to the forest entitled them to; but to give it at the hands of Government officials. If the forest is of sufficient extent to employ a special officer, the commune, instead of the four cents, are charged his pay and allowances, as well as other working charges.

The government forests are about 600,000 acres of the above, and the cost of working and all expenses is about $650,000 annually, the receipts being $1,500,000, and the profit therefore $850,000, or, taking the actual figures, about $1.50 per acre per annum. This, of course, takes no account of the value of the land, or what it might rent or sell for if cleared.

Hanover is a province of Prussia. The head office is therefore in Berlin. The forest establishment of Hanover consist of one director and over-forest master, who is also a councillor; twenty forest masters in charge of circles or divisions, forming also a board of management on all forest matters; one hundred and twelve over-foresters in charge of forest districts (*revier*) averaging seven or eight thousand acres each; four hundred and three foresters who assist the over-foresters, and have charge of portions of a district; three hundred and forty-three overseers, under-foresters, etc., employed in watching and protecting the forest, and supervising the work that is executed by hired weekly or daily labor, or on contract under supervision of the fixed establishments. A cash-keeper is attached to each over forester, who receives and disburses all moneys out of the forest cash chest, with which the over-forester has nothing to do, although his accounts should, of course, tally with those of the cash-keeper. For payment of laborers, etc., he gives orders on the cash-keeper, whose books are examined by the forest-master in charge of the division, and accounts rendered to the head office in Hanover, and thence to Berlin.

All the forests have been surveyed, valued, and divided into blocks in this manner:—

Besides those already enumerated, there is, for the sole purpose of measuring, valuing, and framing working plans for the forest, a superintendent, draughtsmen, and clerks, generally practical foresters, and a staff of surveyors and forest valuators, who are generally candidates for the position of over-forester.

When a forest was about to be taken in hand and worked systematically, a surveyor and valuator were despatched to the spot, the former working under the directions of the latter, who placed himself in communication with the local forest officer and the inhabitants interested, and obtained from them all the information in his power. The surveyor first surveyed the whole district, then the different divisions, as pointed out by the valuator, who defined them according to the description of the timber standing, and any conditions affecting the nature of the trees to be grown in future. While the surveyor did this the valuator valued the trees, formed a register of rights with a view to commutation, considered the best plan of working the forest, the roads, in fact, all which enabled him to form a plan for the head office, and a subordinate plan to be handed over to the executive officer as his "standing orders."

The valuator and surveyor return to headquarters, and prepare the maps and plans, which are submitted to the board of forest-masters, the forest director and other councillors of the Finance Department, who are thus prepared to listen to any objections made by communities or individuals, which are very rarely made now, as the people have learned that the action of the officers is not adverse to their interests, and are willing to allow them to settle matters.

The executive officer has thus in his hands maps showing each division of the forest tract in his charge, and instructions—the quantity to be felled yearly, the extent to be planted, the state in which the forest should be ten, twenty or a hundred years after the plans were made, all calculated—so that the over-forester has only to carry out the instructions given him, allowances being made for unavoidable difficulties—failure of seed, occurances of storms, and the like.

The forest-masters have no executive work, but control four to six over-foresters, of whose labor they make frequent reports to the Director (both in forest and office work). The over-foresters give annual report of operations. They spend most of their time in the forest, supervising the felling, planting, sowing, thinning, carting and selling of timber. The laying down of roads is done by a forest officer, but the actual work is carried out by the local officer, who has also much office work, giving grazing licenses, etc., and preparations of returns, but his work is out of doors compared to that of the forest-master, who has more office work; comparing operations and rates in the districts, collecting statistics, settling disputes, and as a member of the forest committee, revising working plans.

The main object aimed at in any scientific forestry is, to convert the natural forest, consisting of trees, young and old, good and bad, too thick and too thin, into blocks of trees of the better description, of the same age, and capable of being worked—that is, thinned out, felled, and reproduced, or replanted, in succession, a block being taken in hand each year. In carrying out such a system, considerations must be attended to, such as the relation of the block to the whole forest system; the needs of the people in timber, firewood, leaves for manure and pasturage; the soil, the situation as regards winds (which must be attended to in felling to lessen damage), and precautions against insects, fire, trespass or theft.

The plans need revising every twenty years, though it is marvellous to notice to what an extent the original scheme has generally answered.

After a forest has (to give some idea of management) by thinning, planting, and so forth, been gradually got into perfect order as described, the system of natural reproduction forms great part of the German method. It is as follows:—

The rotation and periods are fixed in the working plan. For beech "hochwald" it is in Hanover one hundred and twenty years, divided into six period of twenty years each, that is to say, when the forest has been brought into order there should be nearly equal areas under crop of trees in each of the six periods, that is from one year to twenty; from twenty years to forty, and so on. When a block arrives in the last period, felling is commenced by what is called a preparatory clearing, followed by a "clearing for light" in the first year after seed has fallen (the beech seeds every fourth or fifth year) with the object of—1st, preparing the ground for the seed; 2nd, allowing it to germinate; 3rd, affording light to the young seedlings. If there is a good seed-year and sufficient rain, the ground should be covered with seedlings in two or three years after the first clearing; but it is better generally to wait for a second seed year, and aid nature by hand-sowing, transplanting from the patches of many to the barer spots, and turning up the turf to give the seeds a better chance of gerating.

When the ground is well covered the old trees are felled and carefully removed, so as to do as little damage as possible to the new crop, and the block recommences life, so to speak, nothing further being done till the first thinning. The time allowed between the first and final clearings is from eight to fifteen years. But in many provinces they do away with this system, and remove the old trees so gradually that there can hardly be said to be any clearing at all, the new crop of trees being well advanced before the last of the old trees is removed.

In these forests can be seen all the periods of growth—nurseries and schools for seedlings, which are transferred thither, at the age of two to four years, from the seed-beds, and are pruned and transplanted as often as seems required till finally planted out, sometimes not till twelve or fourteen years old. There are many methods of planting adopted here. The steepest and most rocky sides of the hills are covered with forests, which have been created by the labors of the Forest Department. In many such places, where even the few handfuls of soil placed around the young tree had to be carried some distance, it is not contended that the first plantation will yield a pecuniary profit, but the improvement in climate by the retention of the moisture, and reclamation of large tracts formerly barren and unproductive, is taken into account; besides which the dropping of leaves and needles from the trees will ere long create a soil and vegetation, and insure the success of plantations in future years, and conseqnent surplus.

Prussia.

Prusssia has twenty millions of acres of forests, ten millions of which are private, and the remainder, with which we have more to do, state, commercial, and ecclesiastical.

Of these the income is $14,000,000, and the expenses $7,500,000, leaving $6,500,000 clear. This will not show much, in fact not more than 65c. per acre, but there are other returns of more than mere yearly revenue importance. When it is considered that this result is arrived at without trenching upon the capital or stock of timber in the forests, which, on the contrary, is being increased and improved in every province of the kingdom; and that the indirect value to the people of many forest previleges, which they exercise free of charge, must be very great, not to mention the benefit to all in the shape of public recreation grounds and an improved climate, some idea may be arrived at of the enormous value and benefit such a system of state forests must confer on Prussia.

The forests, as already stated concerning Hanover, form part of the Finance Department, and are presided over by an overland-forest-master, and ministerial director, aided by a revenue councillor and joint ministerial director, and a numerous council or board.

There are two forest academies, one near Berlin, and one in Hanover. The overland-forest-master is curator of the academies, and at the head of each is an overland-forest-master, who is aided by a numerous staff of professors and assistant-professors.

There are twelve provinces in Prussia, divided into thirty circles, and to each an over-forest-master, who is appointed to represent the forest department in the council of local administration, and is aided by councillors and by the forest masters as a board, to represent forest interests in the government. Next in order comes the forest-masters, numbering one hundred and eight, in charge of divisions with an average area of sixty thousand acres, and then the executive officers, seven hundred and six over-foresters, to each of whom is 7,000 acres, and to each of whom is attached a cash-keeper, and three thousand six hundred and forty-six foresters, or overseers, with ranges of a thousand to three thousand acres.

At the academy near Berlin are seven professors with assistants. There is an experimental garden attached, with an over-forester in charge of the technical portion, and professors for the meteorological, zoological, and chemical sections. The number of students averages sixty-five. The varied apparatus includes a building where the seed is dried and separated from the cones, large seed-beds of spruce, fir, and willow, full opportunities of transplanting seedlings, and examples of every kind of trees for botanical study.

There is here a museum, rich in specimens of all sorts of birds, animals, and insects found in the forests. In cases where the animal or insect does damage to trees, specimens of the branch, bark, leaf, or cone, in a healty state, and after being attacked, are exhibited close to each, so that the students can see at a glance the nature of the damage, and connect it with the animal which causes it. Thus we have squirrels, rats, beavers, and mice, set up gnawing at the barks, grubbing at the roots, etc. Insects are shown in the several stages of their existence—larvæ, chrysalis, caterpillar, moth, with their ramifications in the stem or branches of the tree. These, with specimen blocks of almost all descriptions of timber, form a most instructive collection. There is a forest district attached, remarkable for the growth of Scotch fir and spruce on a poor sandy soil, and in spite of repeated attacks by insects.

Nothing is more remarkable than the extent of study required from forest candidates, and the number of years they are content to spend in studying or waiting an appointment. The would-be over-forester, which is the lowest of the gazetted appointments, must pass certain terms at a Government school, a year in a district with an over-forester, an examination as forest-pupil, two years at a forest academy, an examination in scientific forestry and land surveying. He is then a forest candidate. Then two years practical study, nine months of it doing duty as an actual forester; then another examination. He is now an over-forester candidate. The first examination tests his theory; the second his practice. Then he will be occasionally employed in the academies, or in charge of a district, only then getting allowances. After five years of this he may look for steady employment.

Thus five years without pay are given in study; five in probation with but meagre pay when employed, and the time is often longer, before regularly installed. Yet so great is the desire for Government—especially forest—service, that there are numerous candidates.

The qualifications for admission into the subordinate grades—forester, sub-forester, overseer—have a military tendency. Candidates, after two years in the forest, enter a jager battalion, and bind themselves for twelve years' service. After three years they obtain leave, and are employed in the forest as huntsmen or game keepers. After eight years they must have passed the forester's test, which consists in six months' charge of a district, and an examination. At the end of twelve years they are discharged with a certificate entitling them to employment in the forest establishments. The appointments are much sought after, and in 1867 there were two hundred and twenty-one applicants for one hundred and forty-five vacancies, but many are absorbed by communal and private forests.

In some provinces the Prussian Government has certain rights concerning the management of even private forests—in others none.

While on the subject of Prussia, it may be well here to insert some extracts from a letter received from Baron Von Steuben, a Prussian nobleman, now Royal Chief Forester of the German Empire, by the Forestry Congress, at Cincinnati, in April of last year. He remarks:—

"There can be no doubt that every country requires a certain quantity of well-stocked woods, not only to supply the demands for building material and fuel, but more especially to secure suitable meteorological conditions, to preserve the fertility of the soil, and out of sanitary considerations. The ratio of the minimum quantity and judicious local distribution of the indispensible forest to the aggregate area cannot be expressed by a universal rule, but the same can only be approximated by scientific investigation. Above all things, it is essential to prevent forest destruction where such would injuriously affect the fertility of the soil. It is important, then, to preserve and to cultivate judiciously those forests which stand at the head-waters and on the banks of the larger streams, because, through their indiscriminate destruction, fluctuations in the stage of water, sand-bars, and inundations of arable lands are

occasioned. It appears also necessary to preserve and properly to cultivate woods in quicksands, or the summits and ridges, as well as on the steep sides of mountains, along the sea coasts, and other exposed localities.

"In Germany, and especially in my more narrow-bounded Fatherland, Prussia, it is regarded as of the greatest importance, not only to preserve the forests already there, but to extend them as much as possible.

"In the National Appropriation Bill large sums are set apart for the purchase of such lands as are unfit for cultivation, and for utilizing the same by planting trees.

"With reference to forests owned by private individuals, they are not restrained in the use of their forests, and may, according to their own judgment, clear the same and till the soil, in short, do what they like, and yet there may be certain restrictions placed upon the free use of the same as soon as danger to the common welfare is feared; these restrictions are prescribed by the law of July 5, 1875, relative to forest protection.

"This law is applicable in cases :—

"1. Where, by reason of the sandy nature of the soil, adjoining lands, or public grounds, natural or artificial courses, are in danger of being covered with sand.

"2. Where, through the washing away of the soil, or through the formation of cascades in open places on the ridges of hill and on hillsides, the arable lands, streets, or buildings living below are in danger of being covered with earth or stone, or of being flooded; or the lands or public grounds, or buildings lying above are in danger of sliding.

"3. Where, through the destruction of forests along the banks of canals or natural streams, riparian lands are in danger of caving, or buildings, hitherto protected by the woods are in danger of iceflows.

"4. Where, through the destruction of forests, rivers are in danger of a diminution of the stage of the water.

"5. Where, through the destruction of forests in open places and near the lakes, neighboring fields are seriously exposed to the detrimental influences of winds.

"In the cases above mentioned, which have been copied verbatim from the statute book, the manner of use as well as the culture of forests may be legally ordered, in order to prevent those dangers where the dangers to be averted are considerably in excess of the damages which would result to the owner by reason of the restrictions,"

Saxony.

The state forests are nearly 400,000 acres, worked at an expense of $500,000, receiving $1,750,000, leaving a clear rental of $3 per acre. The expenditure is planting, draining, roads, improvement of inferior woods, felling, transport, killing insects, etc. About five thousand acres are planted yearly, at an average cost of $7.50 per acre.

The fixed establishment is one inspector, fifteen over-forest-masters, one hundred and twenty district foresters, sixteen cash-keepers, thirteen engineers, twenty-seven foresters, and eighty-three sub-foresters.

There is a forest academy at Tharandt, with a separate staff of professors.

The system of planting now principally experimented on is much the same as that previously described, the young trees being several feet high before the old trees are all removed. One operation is noticeable. It was decided to convert a mixed hardwood forest, patchy and irregular, with impoverished soil, in 1820, into a coniferous forest, and maps were drawn showing what it would be in eighty years. Private intersecting lands have been bought up, and by 1,900 the ideal chart will be actual. Already, in place of a straggling wood, irregularly covered with timber trees of inferior growth, we have now a compact close forest, regularly wooded in sections of different ages, principally spruce and Scotch fir, but containing also fine oak, ash and beech, with straight and clean stems. In many cases the young oaks have been left where pines were planted, and the introduction of the latter has a wonderfully good effect on the oaks.

All private rights were abolished and compensated in these forests by a Bill passed in 1832.

Bavaria.

The state forests are 3,000,000 acres. They return, after paying all expenses, about $1.50 per acre per annum. About 30,000 acres are planted or sown annually, taking 35,000,000 plants and 1,000,000 lbs. seed. Persons found guilty of breach of forest rules have been punished by enforced labor in the woods. Private forest rights are being bought up by the Government.

The system of management is much the same as that previously described. There is a forest academy at Aschaffenburg, with one hundred and sixty-five students.

It will be interesting to notice the injury and process of repair in the fine forests of the Spessart in Bavaria. The deterioration was caused by felling the forest trees as soon as, or before, they were mature, the impoverishment of the soil by the removal of leaves and litter, and the allowing dense underwood to grow unchecked. Inferior trees got the upper hand and prevented the growth of good, while they drained the already impoverished soil and gave nothing in return. Early in the present century the matter attracted attention, and every means have since been adopted to grow oaks, beech, and coniferæ. The result is, though not yet equal to the uniformity of other forests, nowhere can one find finer clumps and individual trees. Inferior trees will soon be rare in the whole forest. In remote portions where the humus had not been destroyed, the growth of beech and oak is truly magnificent, tracts of 120-year old beech and 300-year old oaks being common, the latter with clear trunks running up to 100 feet high. When we compare these with other portions where the crippled and stunted appearance of the trees shows the effect of unregulated grazing and loss of litter, burning of the decayed wood, and forest theft and mischief, or the soil and vegetation, the result is marked. The circumstances, says the Indian Commissioner, are analogous with what has gone on in India for centuries, and is still more or less permitted. The vast extent of forests, which once clothed the hill sides and extended far out on the plains, and the luxuriant growth of the tropics, have hitherto, or until the last two years, prevented the gradual deterioration of our forests being marked or felt, but the subject has now attracted attention, and none too soon. If any have doubts in the matter, let them visit the Spessart, study the history of its forests and judge for themselves.

The forests are sharply protected by law, the average number of prosecutions annually being thirty per thousand acres. The crimes are mischief to wood, pasture, grass, straw, and miscellaneous.

Austria.

Scientific forestry is not so far advanced as in Germany, but officials are busily introducing a reorganization, by means of which, there is no doubt, it will soon be on a par with other states.

The state forests have been largely sold to meet state necessities, but there still remains nearly 2,000,000 productive acres, which yield, however, after expenses are paid, little over 25 cents per acre.

The existing establishments of forestry are not uniform, but there are about twelve hundred employees, of whom twenty-two are forest-masters. Some of these have almost sinecures, while others have six times too much to do, and it is the same with those in the subordinate ranks. The forest academy is at Mariabrunn, near Vienna. There are about thirty-five students.

The collections are fine, possessing specimens of all instruments and appliances made use of in felling, squaring, sawing, carting, and preparing timber, models of saw mills and machinery of all descriptions, plans of river beds improved and embanked for floating, sluices of all sorts, dams and piers for directing rafts in their course and catching firewood, models of rafts, and specimens of home and foreign timber of all kinds. The damage done by animals and insects is also exhibited here comprehensively. There is also a forest garden attached to the academy for the instruction of the students.

The staff of the academy consists of the director, thirteen professors and assistant professors, with subordinates in the account office, laboratory, etc. There is also a forest school at Bruhl, for training young men (of whom eight were there) as practical foresters.

The greater number of those trained here are intended for private and not for Government service, their expenses for board and lodging being paid by noblemen and large proprietors, from whose estates they come, and to whom they return as forest officers and workmen. The state maintains the schools, and pays the professors' salaries, and there are no extra fees. This cannot fail to assist the intelligent management of the private forests of the empire, which are very extensive. The absence of numerous candidates for the government forest service, and preference for private employment is noteworthy, when compared with the opposite state of things in Prussia. The irregular promotion, lack of system, and low salaries in the Austrian forest service are the explanation.

The Austrian crown forests have been neglected; they are patchy with a low and decreasing yield per acre. There has been till now no attempt at rotation of blocks or working in periods. As is found in India, a glance at the outskirts of the forests would lead one to suppose it fairly stocked with timber, but a more careful inspection proves that this is not the case, and that only in the valleys and more remote portions, where the soil is particularly good and the axe has not been so frequent in its inroads, is there a fair and regular crop.

Herr Schuppitch, the present director, is trying hard to change matters, and is changing the hardwood crop, which has exhausted the soil for that class, with pine growths, which besides grow quicker and pay better, He is also dividing into blocks and periods, and planting up many bare or ill-covered tracts, where natural reproduction is impossible owing to the absence of standard trees.

Grand Duchy of Baden.

We shall now notice a private forest, that of the Prince of Furstenburgh, in the Black Forest. The receipts and expenditure are not obtainable, as are the public ones, but we are informed that the forests are economically worked, and that the liberal sums expended in road-making, fitting rivers for floating, housing foresters, &c., were well repaid by the facilities secured, and contentment and zeal of the employees. In the case of this, as of other private forests, it is evident that a private individual is not burdened with considerations of policy aud public good as in a State. The forests are, therefore, worked with the best profit compatible with their retention as capital.

There are about 72,000 acres, in charge of 18 foresters and over-foresters, who of course have many subordinates. The method employed in the slow felling and continual reproduction before mentioned, a block being about forty years in clearing before all the old are replaced by the new trees. Attention and intelligence are necessary, for seed will not grow nor the seedlings flourish without enough light, and the forest officer must watch that they get it; and again much greater care is needed in felling and hauling away when the trees are surrounded by lofty saplings and young trees than when the seedlings of the next crop are not more than a foot or two high. In this the axe-men of the Black Forest are adepts, and the damage very slight to what it would be in other hands.

It may be useful to describe their manner of bringing timber down the rivers. It cannot here be done when the stream is in flood; in fact, the less water in it the better so long as sufficient is stored up above to float the rafts. Reservoirs are made, and the water poured into the river bed when the raft is ready. The streams are often small, of only fifteen or twenty feet in width, and have to be prepared for floating, by being cleared of any large rocks or boulders, and "sleepered," if we may use the expression, by pieces of wood firmly fixed in the bed of the stream every few yards. These prevent the formation of holes in the bed, and serve for the raft to slide on if it touches the bottom, The first impression of the Indian commissioner when he saw the float, composed of stems from twenty to sixty feet in length tied together with withes at the ends, and lying zigzag in the bed of the mountain stream, up and down which they extended sixteen hundred feet, was that it was simply impossible they ever could be floated down the stream, with all its windings, and over the locks and rocks which occurred pretty frequently. It contained 880 stems, eight or ten of which abreast formed as it were a link in the raft. There were thirty links, not fastened laterally, but only at both ends to the next link. The breadth is greatest at about two-thirds from the prow, which is narrow, and consists of only three stems abreast, with in front of all a piece formed of old wood and raised out of water like the bow of a whale-boat, so as to lead the raft and the largest and heaviest stems placed in the broadest part and towards the stern or hinder part, which does not taper at all. There are two or three breaks, by which the speed is slacked or the raft stopped if needed. When all is ready, the water from above is let loose, and the raft, perhaps not now lying in a foot of water, begins to float a little, but is not let go till two-thirds of the water is passed, as it is a curious fact that when let go, if there is much descent, it travels faster than the water, and has to be stopped to let the water get ahead again. The raft has eight or ten men and boys, one or two of whom stand by the master at the chief break, on which the safty of all depends. When let go it is exceedingly curious to see the forward part dart off at the rate of five miles an hour, and the several links which have been lying zigzag and perhaps high and dry uncoil themselves and follow in its wake till the whole dashes along at great speed and apparently uncontrolled. Accidents are rare, as they are well trained (lads of six or eight can be seen going down in miniature floats); but for one not accustomed to it, it is nearly impossible to stay on the raft at all, as it literally springs out of the water on touching a rock, dashes around a rapid turn, or jumps a weir with a fall of several feet. Forty or fifty miles can be got over in a day if stoppages to let the water ahead are not too frequent or the stream is not swollen by rains.

Remarks on Germany.

The Indian commissioner proceeds to remark on the German history of forestry. Perhaps it will be here admissible that I make one myself. Let me say that, when we consider the immense extent and rapid growth of forests in India, the vast amount in Government hands, and yet find that they are so rapidly deteriorating as to necessitate the despatch of commissioners to Europe to learn the methods of preserving the forest, it is likely that Canada has just as much reason to bestir herself in the matter. Let us notice also, by some of the valuable tables Capt. Walker has furnished, that in Germany & Prussia alone that there are nearly two hundred and fifty millions of acres of forests. We will well have already understood, by the foregoing pages, how different the great mass of these forests, with their great reserves of growing and well cared for trees, planned and prepared for many years, so that the forests can be depended on to give its regular and annual yield of valuable timber in perpetuity, are from our Canadian reserves, which are cut without regard to the future, and are fast disappearing before the combined assault of the settler and the lumberman.

On asking, where are we to look for a model or precedent on which to work, he replies "To Germany, where the management of forests by the State has been carried on for hundreds of years. Not the mere planting of a few hundred acres here, or reserving a few thousand acres there, but a general system of forest management, commencing by a careful survey, stock-taking, definition and commutation of all rights and servitudes, careful experiments in the rate of growth, the best soil for each description of tree; in fact, in every branch of the subject, and resulting in what we find to-day, hundreds of thousands of acres mapped, divided into periods and blocks, and worked to the best advantage both with regard to present and future, and the annual yield of which now, and for many years to come, is known and fixed to within a few hundred cubic feet."

(*Continued on page 252.*)

Market Reports.

MONTREAL.

From Our Own Correspondent.

AUG. 9.—Business has been rather slow since the dato of our last report, but at the same time a fair steady local demand has been experienced as the building trade has been very active. Shipping demand has been rather light. Prices in Ottawa are steady, but it is probable there will be a break before the fall. Cherry lumber has advanced in price here, but a further decline is noted in laths which are in fair supply, We quote yard prices as under :

Pine, 1st quality, ℔ M	$35 00@40 00
P ne, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 60@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

SHIPPING.

Comparatively little lumber has as yet been shipped to South America, but a good deal is expected to go forward from this till the end of the season. Shipments to Great Britain have been active since the date of our last report. The following clearances have been made at the custom house :—To South America, Bk. Peter Crearer, 540,175 ft ; Bk. Wolfe, 807,545 ft ; Bk. Pistaloqua 518,402 ft ; Bk. Tuba, 741,887 ft ; Bk. Wavalench, 445,510 ft ; Bk. Raino, 431,003 feet. To Hartlepool, Bk. Leffler, 461,475 feet. To Glasgow, SS Concordia, 7162 pcs deals ; SS Cynthia, 5,120 pcs deals ; Ship Ardmore, 3,150 pcs deals ; SS Titania, 7,155 pcs deals ; SS Concordia, 3,307 pcs deals. To Liverpool, SS Lake Huron, 2,410 pcs deals ; SS Nipigon, 4,581 pcs deals ; SS Juliet, 15,466 pcs deals ; SS Oregon, 5,472 pcs deals and 15,671 boards ; SS Texas, 4,647 pcs deals ; SS Toronto, 6,023 pcs deals ; SS Milanese, 10,735 pcs deals and 1,956 boards ; SS Manitoba, 4,917 pcs deals ; SS Mississippi, 7,706 pcs deals ; SS Sarnia, 2,224 pcs deals and 5,845 boards ; SS Lake Champlain, 2,499 pcs deals ; SS Montreal, 6,346 pcs deals and 1,818 boards. To Gloucester, Bk Lorna Doon, 290,812 ft white pine deals and ends. To London, Bk Tevit, 312,675 ft deals ; Bk Murie 248 std deals ; Bk Joy, 11,822 pcs deals ; SS Avlona, 3,038 pcs deals ; SS Erl King, 8,095 pcs deals ; Bk Gulfe, 13,254 pcs deals and 35,077 boards ; SS Carmona, 15,813 pcs deals ; Bk Punjaub, 15,078 pcs deals and 892 ends ; Bk Columbus, 16,757 pcs deals ; SS Viking, 10,847 pcs deals ; SS Barcelona, 8,065 pcs deals ; SS Ocean King, 2,903 pcs deals. To Bristol, SS Dorset, 17,998 pcs deals ; Bk Eyra, 112 stad deals ; SS Somerset, 3,237 pcs deals ; Bk Ceres, 282,947 ft lumber ; Bk Georgetown, 7,335 pcs deals. To Grimsby, Bk Gustaff Adolf, 137 std deals. To Barrows, SS Ross-shire, 38,255 pcs deals 2,077 ends, 13,389 pine boards and 4,386 staves.

CORDWOOD.

Prices are decidedly in holders favor, and for some descriptions we advance prices. There is a scarcity of tamarac which is relatively dearer than other kinds of wood. The demand for wood has been slow, stocks in the city are fair, but on the wharf less than usual at this season of the year, although this is not of so much consequence now as in former years as it is procurable in the winter by the railways. We quote prices on the wharf as under :

Long Maple	$ 7 00
Short "	6 50
Long Birch	7 00
Long Beech	6 00
Short "	5 00
Long Tamarack	6 00

TORONTO.

From Our Own Correspondent.

AUG. 9.—Trade from the retail yards is now much better than when I last wroto you, although not at all pushing, and stocks are quite light in all the yards coming under my notice, and there appears a desire on the part of some dealers to purchase dry lots, more especially strips, both 1 in. and 1¼ in. flooring grade. The demand for XXX shingles continues in excess of the supply and prices remain firm. Dimension lumber in 18x20 ft lengths is still hard to procure. This may in part be ascribed to the large demand for car bottom plank of the lengths above named. Shipments by car load to western points is now almost a thing of the past, consequent on the increased tariff of one cent per hundred weight over the Midland and Grand Trunk railroads, nearly all orders will now find their way by the water route to Sarnia and other points, and receive their distribution from the docks there, by rail to the various places required, and will take less time to reach its destination by this route than that usually occupied by the railroads above named.

Business at the docks begins to wear a better aspect. Members of different lumber firms from the American side have put in their appearance during the past week, and lumber is now on the move, and not before it was needed, as it was quite impossible to pile any more on the docks until some stuff was moved to make room, but I think it is generally conceded by all the wholesale dealers that the outlook is much more hopeful than it was two weeks ago, and my own impression is that the remainder of the season will be a fairly active one. Lath by car lots is somewhat lower, prices ranging from $2.20 to 2.25 per M, for A 1 lath. The demand for good basswood is quite active, purchasers for which can be easily found for an unlimited quantity. Black ash is also in good demand and not much coming forward.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	13 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1¼-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of August 4th, says : General trade is of very restricted proportions, rather more so than is customary at this mid-season period. Buyers are feeling their way along, and are waiting to see how fall business will develop and turn. In fact there is just about the same spirit of conservatism that is prevailing in almost every class of trade. Prices show very little change to note.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of August 4th says :—The total number of lumber and shingle cargoes arrived at this port for the week ended on Wednesday, was 234, as against 217 the week before. The arrivals in port and the offerings on the market continue to show an excess for the last half of July over a corresponding time last year. The fleet was large from Monday to Wednesday, when there was a considerable thinning out, though on Thursday morning there were a number of cargoes offered, the proportion of shingles being excessive.

The market during the week, probably on account of the numerous offerings, was a little slower than that of the weeks preceding, though prices on good average stock did not suffer by the tardy movement. Trades were made slower than formerly, that was all. The wholesale merchants are now having a quiet trade at the yards, so that they feel no urgency to put in stocks beyond keeping their pilers employed, and they had plenty of time to whittle and "gas" on the market. They have hung off about closing bargains just because they could as well as not, and for the reason that a little delay might make the commission men a little nervous and anxious, and that might probably prompt them to offer slight concessions in price or time of payment.

Quotation are as follows :

Short dimension, green	$ 9 50@10 00
Long dimension, green	10 50@11 50
Boards and strips—No. 2	11 00@13 00
Boards and strips—Medium	13 50@16 50
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 25@ 2 35
Extra A	2 45@ 2 80
Lath	1 75@ 1 80

Receipts of lumber, shingles, etc., for the week ending Aug. 2. as reported by the Lumberman's Exchange :—

	RECEIPTS. Lumber.	Shingles.
1883	66,053,000	42,609,000
1882	65,294,000	17,111,000

FROM JANUARY 1, 1883, TO AUGUST 2, 1883, INCLUSIVE.

	RECEIPTS. Lumber.	Shingles.
1883	833,517,000	571,145,000
1882	1,030,909,000	450,295,000
Increase		180,850,000
Decrease	197,392,000	

STOCK ON HAND JULY. 1.

	1883.	1882.	1881.
Lumber	430,375,078	443,039,546	352,391,329
Shingles	246,987,650	223,839,500	142,726,600
Lath	43,612,922	26,691,152	30,764,312
Pickets	1,486,077	1,902,187	3,170,228
Cedar posts	409,258	154,143	120,559

OSWEGO, N. Y.

From Our Own Correspondent.

We cannot change quotations, although we think prices are a shade lower. A strong desire to sell is manifested by most of the dealers. Stocks are large and assortment good : dealers generally are anticipating a brisk demand during the fall months, but at present business is very dull and arrivals small.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1½ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

TYNE.

The *Timber Trades Journal* of July 28, says: The past seven days have brought forward a large number of timber-laden vessels, and as several of them are from Quebec, and also one steamer from Hudikswall with an entire cargo of deals, the total importation will be larger than usual. Large as it has been, it is yet a long way short, by about 12,000 loads of the importation to same date last year. So far the arrivals do not appear to have increased the stock on hand, a large proportion finding its way direct into consumption. The American vessels are now coming forward ; some four or five cargoes have already arrived, and a large fleet is daily expected. An entire steamer cargo from Hudikswall, to order of Messrs. Borries, Craig & Co., has arrived. Though by no means so general here as at some other ports, yet it is evident steamers are being sought after for wood cargoes for the Tyne, and will ere long run off the wood ships ; larger arrangements will, however, have to be made for the reception of wood goods by the dock authorities here before merchants will generally see their way to charter steamers as the usual method.

Trade remains fairly good, and although prices are not higher they are well maintained. Contracting too is going on in a fairly average way ; the prospect of work is on the whole, not discouraging.

LONDON.

The *Timber Trades Journal* of July 28, says : The disposition at present noticeable amongst the trade to secure what is offering, if it can be got at a price, cannot be taken otherwise than as a favorable symptom of the market. There are plenty of buyers if the quotations are low enough ; and it is rather regretful that so great a reduction was originally made on the commoner qualities of Swedish redwood, as that was accepted by the trade as indicative of a downward tendency, and has resulted in bringing down the prices of the scarcer and better-classed goods. This, we think, even with a somewhat sluggish sale, might have been partially avoided, or at any rate confined within more reasonable bounds.

We are glad to see the dock deliveries are keeping up, and though still behind last year, the difference is only slight. Including the overside deliveries, we consider the consumption is quite as active this year as it has been for many seasons.

CARDIFF.

The *Timber Trades Journal* of July 28, says : This last week has been a very dull one in the timber trade. Two vessels have arrived from Canada and one from the Baltic with deals, and another from the Baltic with sleepers. One steamer has also come forward with a cargo for three different receivers. This method of doing business is being very carefully watched to see how it works. The trade for the Midlands is very quiet ; only small lots have been sent off, and fresh orders are difficult to obtain. There have been some small purchases from the Baltic, but we can hear of nothing being done from Canada, although importers are open to buy at low prices. Props and mining timber are coming in sparingly ; still prices have not so far materially altered.

GLASGOW.

The *Timber Trades Journal* of July 28, says: The first public sale since the "fair holidays" was held here on the 25th of July. The attendance was pretty good, and transactions were to a fair extent, though of the goods catalogued a considerable proportion was withdrawn. The catalogue consisted largely of spruce deals, of which there is a comparatively heavy stock in this market at present. For spruce of 2nd quality average fair prices are obtainable, as will have been observed. A great part, however, of the stock now in yard is of inferior quality, and brings low prices.

GOOD LUMBER AT A PREMIUM.

IT was appareut to any one who carefully looked over the field last winter and spring that a decline in lumber was inevitable. This paper has been censured in some directions because it forecast the condition, but it did so after the

most thorough conviction that its utterances were those of true prophecy. It needs no argument now to prove that it was correct. It saw the decline so clearly that it felt willing to risk its reputation in asserting what the outcome would be. There is one feature of the lumber business, however, that deserves special consideration. The upper grades, particularly in Michigan and the east, have not sympathized with the lower enes, and the only reason is that good lumber, in proportion to the cut, is not so plentiful as it used to be. Logs from certain streams, which years ago produced twenty-five per cent, uppers, will now hardly produce five. There has been a steady deterioration, In many instances now it is the trees that have been left that are cut. The result is that while there is plenty of lumber, too much in fact, the finer grades are wanting. The same is true in walnut. So much poor stuff has been rushed on the markets that it has been impossible to sell it at anything like former prices, but good walnut has been in demand at good figures. Lumber dealers may as well make up their minds, first as last, that really good lumber, in either soft or hardwood, will be comparatively scarce, and the only conclusion that can be reached is that it will be held at a premium.—*Northwestern Lumberman.*

TREES, LOGS AND LUMBER.

A representative of the New York *Evening Post* furnishes his paper the following graphic description of his view of the Saginaw river.

For 16 miles down to Bay City, near Lake Huron, the stream flows between wooden strands. The eye stretches itself in vain to see beyond the lumber horizon that stretches east and west. The yellow waters, perhaps 200 feet wide, pass first betwecn continuous booms, each enclosing its army of giant logs. These hooms reach far above Saginaw, and if we include the tributaries of the river and count both sides, make up a line of posts seventy-five miles long. Next to the logs and on the bank proper rise, most impressive of all, the tracts of sawn lumber. Pile on pile they rise on either side for sixteen miles up and down the stream, covering acre after acre, until the wooden monotony becomes thinner, only to rise again to more imposing height and width around a new cluster of mills. These mills, often of grand proportions, spring from their lumber heaps as a giant of fairy story looms amid the disintegrated bones of his victims. Their tall chimneys belch black smoke, the rattling saws cut the air with their distant rasp, and the sense of industrial activeness is filled out by the hives of workmen swarming over the lumber hills and loading them, by slow but steady toil, into barges whose hulls rival the capacity of a Cunarder.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec:

Aug. 2.—Sundry lots, staves, New London cove.

R. Campbell & Son, white pine, &c., Cap Rouge.

E. L. Kelsey, staves, Dobell's (Sillery).

E. L. Kelsey, staves, Bowen s (Sillery).

A. G. Fraser, white pine, &c,, St. Lawrence Docks.

D. D. Calvin & Co., oak, &c., sundry coves.

Smith & McDougall, white pine, &c., Union cove.

J. R. Booth (2), white pine, &c., Cap Rouge.

J. R. Booth (2), white pine, &c., St. Lawrence Docks.

Barrett & Mackay, white pine, &c., Cap Rouge.

Wm. McKay, white pine, &c., Hadlow cove.

B. Caldwell, white and red pine, &c., St. Lawrence Docks.

Barrett & Mackay, white and red pine, &c., Cap Rouge.

ON THE STILL HUNT,

Chippewa Falls, Wis., July 30.—Some of our lumbermen who thought they were going to "catch on" to a big thing up in Duluth and St. Cloud districts, have returned to the Falls. They found that a few others in the country knew there was some pine in Minnesota, as well as themselves, and also that big things were not very plenty or very cheap. Some of them report that there are at least 2,000 men hunting over pine lands in Minnesota the present summer, and mention one Michigan firm that has 40 crews at work estimating and hunting up pine. I have met one man who has been up in the Duluth country for two months, he says that while there is some good pine on pre-emption land, on the whole the most of the government land of any value for lumbering is already picked up. This gentleman spoke of a suit going on in regard to improvements on the St. Louis, which had the effect of keeping down the price of logs for this year. I see by the *Lumberman* that the suit was decided in favor of the boom company, so that now the prices of logs will scarcely go up this season.—*Northwestern Lumberman.*

The *Timber Trades Journal* says:—The alarming destruction of American forests is the subject of an article that will appear in the August number of *Forestry*, from the pen of Mr. William Little, of Montreal, an authority who has made the subject of American forestry a life study. Mr. Little states that at the present reckless and wanton rate of cutting the United States will be entirely denuded of its merchantable yellow (American white) pine in seven years.

A Foul Murder.

A telegram frnm Guyshoro, N. S., states that a deaf, dumb, and blind coloured girl, named Ada Byard, about twenty years of age, living with her father about a mile outside of Guysboro town, has come to her death under circumstances which leave the impression that she was fouly murdered. It appears on Saturday the girl's father went to town, leaving his wife, who is stepmother of the diseased, with the latter and some younger members of the family. On his return home in the evening he found his wife had also gone to town. The girl Ada was in the house, suffering from terrible wounds, apparently inflicted with an axe, which resulted in her death the following day. The evidence adduced at the coroner's inquest was that a little girl, five years of age, locked herself in the house withdeceased and committed thedeed by striking her with an axe, but the npinion prevails that the child is not the guilty person.

Pirates Unearthed.

An extraordinary number of vessels have been wrecked in the Straits of Kertch, Black sea, the past few years, and in cansequence of many suspicious circumstances, such as the wreck of vessels in calm weather and the fact that some pilots grew rapidly rich, an investigation was made by the English insurance companies, who had paid indemnities amounting to many million roubles. It was learned that a pilot named Francisco was head of a band of English, Italian, Greek and Russian pirates, who made a living by disasters on the coast. They were in collusion with the pilots and charged huge sums for assisting vessels pilots suffered to go ashore. In less than two years fifty stranded vessels had resource to the assistance of the pirate salvors. It is said some Government officials are compromised.

Cows in the Pasture.

Murphy heard cows in his orchard the other night, and slipping out the back way appeared suddenly near the front steps, and yelled:—"He-ah Tige! He-ah Tige! He-ah!" Just then a figure rushed past, cleared two fences and vanished in the gloom. "Take 'im! take 'im!" screamed the old man, but his daughter Miranda, who had unaccountably appeared on the scene, secured the dog by the collar and refused to let go. "What ye doin'?" yelled the old man; "don't ye know them cows has been in here three or four times?" "Oh, pa!" was the answer, "but this was only a calf." The old man was pacified, but Adolphus, who was standing out in the road awaiting developments, wasn't, and Miranda will never understand the coldness that has sprung up between them.

Firemen's Demonstration.

St. Catharines, Aug. 9.—The first day's programme of the Firemen's demonstration was carried out here to-day with great *eclat*. All the hotels, and in fact every place where accommodation can be had, are crowded, all the available cots and shakedowns are being utilized, and your correspondent is congratulating himself on having secured quarters at the Welland house. About fifteen hundred firemen from different parts of the province and New York State and about ten thousand visitors are here to-night, besides large numbers from the surrounding country, who have returned home for the night, but who will return to the city in the morning. The procession was a large and magnificent one. It took two hours to pass a given point.

Remarkable Case of Resuscitation.

Paisley, Aug. 9.—This morning while several children were playing near a cistern, one, a two and a half years old son of John Stark, fell in, and before he was taken out some fifteen minutes had elapsed. His mother, who was sick at the time, became nearly frantic over the affair. Several neighborly women pulled the body, which was quite black, out. They rubbed him well for ten minutes and wrapped him in warm blankets, when signs of life began to appear and vomiting was commenced, and when the doctor appeared he showed more symptoms of recovery. He is now weak, but will likely recover.

Canadian Victory.

In a race on Tuesday for the "Fisher" cups at Chicago, the Atalanta, a yacht built at Belleville, and sailed by Canadians, defeated her opponent, the Cora, by 8 m. 45 sec. The *Mail's* correspondent says:—"No sooner had the judges handed in their report than their services were enlisted for a third match to be sailed on Saturday next. So determined are the amateur seamen here that the "Fisher" cups shall not go to Toronto that you must not be surprised if you should hear, on the Atalanta's winning it again (as is generally expected), that she has been bought by Chicago yachtmen."

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$500 Reward!

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THE ONLY VEGETABLE CURE FOR DYSPEPSIA,

Loss of Appetite, Indigestion, Sour Stomach, Habitual Costiveness, Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

"The great difference," says the commissioner, "in climate and local conditions between India and Germany would, doubtless, necessitate important modifications, but I can see no reason why the broad principles of organization and forest management should not be applied with success to our Indian forests, that is, gradually feeling our way as regards the best mode for the forest, and the wishes and interests of the people and the State."

I would here remark that this is still more applicable to Canada, as our climate presents no difference of moment.

"I do not think," he continues, "that we have much to learn from the Germans with regard to the planting and rearing of young trees; but it is with regard to the best method of managing groups or plantations that I consider we may, with advantage, take a leaf out of their book. For instance, I would certainly introduce, in an experimental manner, and on a very small scale, their system of rotation, clearing, and of periods, and endeavor to bring forward a second crop before the first is off the ground, encourage the growth of the better descriptions, and keep down the least valuable, so as gradually to arrive at groups of trees of the same age, description, and class, and eventually at blocks worked in rotation, and containing always a sufficient stock of crop coming on to meet the requirements of future years. To arrive at all this the most careful observations and experiments will have to be made as to the rate of growth and yield per acre of each description of forest, the conditions under which trees grow best and form the most timber, some requiring close and some open planting, some nurses and some not; some, like the oak, requiring a great deal of light, while some, like the beech, do best for many years in the shade. All these points, and many more, demand attention, and till they are settled we shall be merely groping in the dark. In fact, I think it may be taken for granted that all we will do in the way of forestry in the Madras Presidency, during the present century at least, will, after all, be but experimentalizing, which fact, however, need in no way delay the demarkation, survey, and settlement of the forests,"

It may be said here that, if it be necessary to commence at once, in India, it is probably more necessary in Canada, where the process of growth is so much less rapid.

Concerning the capabilities of German foresters, the Captain says:—"An over-forester, and even many of the foresters and overseers, can tell the name, local and botanical, of any tree, shrub and plant, classify it, and state its uses; name and classify every beetle and insect in the forest, and know whether they are harmless or destructive to trees, in what shape they do damage, and what are the best known preventive measures; inform you of the nature of the soil, and to what period the formation belongs; what trees will grow best, and why. All this is known thoroughly, theoretically and practically.

"Then as to the district, the exact yield, rate of growth, and annual increase in value of each block is thoroughly known and can be put down in figures at each moment by the over-forester, who can tell at the commencement of each year how much timber he is going to cut and sell, and from what parts of the forest it is to come, how many acres have to be partially cleared for natural reproduction, how many to be planted, sown, thinned or planted up. The mere details of all this are left, as a rule, entirely to the subordinates, who thoroughly understand them.

"The forest-masters in charge of divisions possess not only the theoretical and scientific knowledge acquired in the forest academy, and the practical experience gained while they were over-foresters in charge of a district, but the more extended knowledge and wider views from their larger field for observation and comparison of causes and results. They are then qualified to decide most points, revise working plans, and supervise operations generally, whilst settling complaints and complications in connection with the forest administrations, advising the local head of the department, and compiling valuable reports and statistical information,"

(To be Continued.)

EXPLORING NEWFOUNDLAND.

Mr. Hall, one of the largest lumber manufacturers in the world, and one of Canada's leading merchants, arrived here, says the St. John, Newfoundland, *Mercury*, on Thursday by the steamship Polino. He brought a party of explorers with him, who departed in the Polino for the purpose of being landed in the bay of Islands, where, should the explorers' reports prove favorable, he proposes to establish a large lumbering manufacturing business. The initiation of the scheme also depends upon the terms upon which the Government will be able to make grants of land; and it is to be hoped that nothing will be left undone to assist in the establishment of an interprise so well calculated to develop a portion of this country. Mr. Hall has also an idea of exploring the Exploits river. He has been looking at our dry-dock, and says that in all his vast experience he has never seen finer timber used in such work—an opinion of great value because of his knowledge of the subect.

Maple Last Blocks.

The Bangor, Me., *Mining and Industrial Journal* has the following: Last blocks are an important article of manufacture in the towns of eastern and northern Maine. Blanchard, Lagrange, Alton and Katahdin Iron Works, will each ship about 25 carloads this season over the Bangor & Piscataquis railroad. Large numbers are also cut on the line of the Eastern & North American division of the Maine Central, and also in the towns to the eastward of Bangor. The blocks are cut from rock maple, and the work of getting them out gives quite remunerative employment to the farmers and their sons during the long winter months. A million and a half of these blocks, valued at about $36,000, were shipped from Bangor last year, principally to Western Maine, New Hampshire and Massachusetts shoe towns. This, however, by no means includes all the last block business of this section, as large quantities are shipped each season by way of Calais.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. It cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle,

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. Dickison,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

A Cure for Cholera Morbus.—A positive cure for this dangerous complaint, and for all acute or chronic forms of Bowel Complaint incident to Summer and Fall, is found in Dr. Fowler's Extract of Wild Strawberry; to he procured from any druggist.

"When all other remedies fail," for Bowel Complaint, Colic, Cramps, Dysentery, etc., "then Dr. Fowler's Extract of Wild Strawberry comes to the rescue." Thus writes W. H. Crooker, druggist, Waterdown, and adds that "its sales are large and increasing."

It is now in season to warn our readers against the sudden attacks of Cholera, Cramp Colic, and the various Bowel Complaints incident to the season of ripe fruit, vegetables, etc. Dr. Fowler's Extract of Wild Strawberry is the grand specific for those troubles.

A Valuable Discovery.—One of the most valuable discoveries in the medical science, for the benefit of mankind, was made when Burdock Blood Bitters were invented. This medicine positively cures all diseases of the Liver, Kidneys, Stomach, Skin and Blood. 25,000 bottles have been sold during the last three months.

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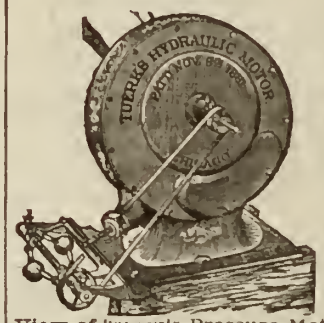

View of Tuerk's Pressure Motor, with Tuerk's Improved Governor Attachment.

For running Sewing Machines for families or for manufactories; also, for running Dental Lathes and Engines, Telephone Generators, Coffee Mills and Roasters, House and Church Organs; also for running one Printing Press or six, at the same time. Paper Cutters, Sausage Machines of any make or size; GRAIN, FREIGHT OR PASSENGER ELEVATORS, Straw Cutters, and all kinds of Machinery by Water Power.

HYDRANT PRESSURE.

☞Cheaper, Quicker and Safer than Steam.

Over Fifty Motors of other makes have been taken out and replaced with the TUERK MOTOR; among the list are the Backus, the Sabin, the Little Giant, the Hayward, Clark's Piston Engine, and others.

Names of a few who have taken out Backus Motors and put in the Tuerk Motor in their place:

C. W. Meikel, Indianapolis, Ind.
Columbus Telephone Co., Columbus, Ohio.
James Egan, Chicago, Ill.
H. C. Hawkins, Cleveland, Ohio.
Printing Office, Hannibal, Mo.
A. Solmens, Hat Manufactory, So. Norwalk, Ct.
Lake Shore & Mich. So. R.R. Shops, Elyria, O.
Index Printing Office, Evanston, Ill.
Republican, Johnstown, N. Y.
Tribune, Salt Lake, Utah.
Alton Printing Co., Alton, Ill.
A. F. Worthington & Co., Cincinnati, Ohio.
Lemon & Co., Waverly, N. Y.
Braun & Jones, Cedar Rapids, Iowa.
Gates, Douglas & Co., Cedar Rapids, Iowa.
Village of Rutland, Rutland, Vt.
W. L. Randall, Chicago, Ill.
A. J. Stoll, Sandusky, Ohio.
Killits & Wayland, Chillicothe, Ohio.
S. A. Morrow, Springfield, Ohio.
R. Putnam, Chillicothe, Ohio.
N. Shelton, Omaha, Neb.
H. J. Lewelling, St. Helena, Cal., and others.

☞Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

Send for Catalogue, and state what you want to run,—give full particulars and Water Pressure per square inch.

TUERK BROS. & JOHNSTON,

86 and 88 Market Street, Chicago, Ill.

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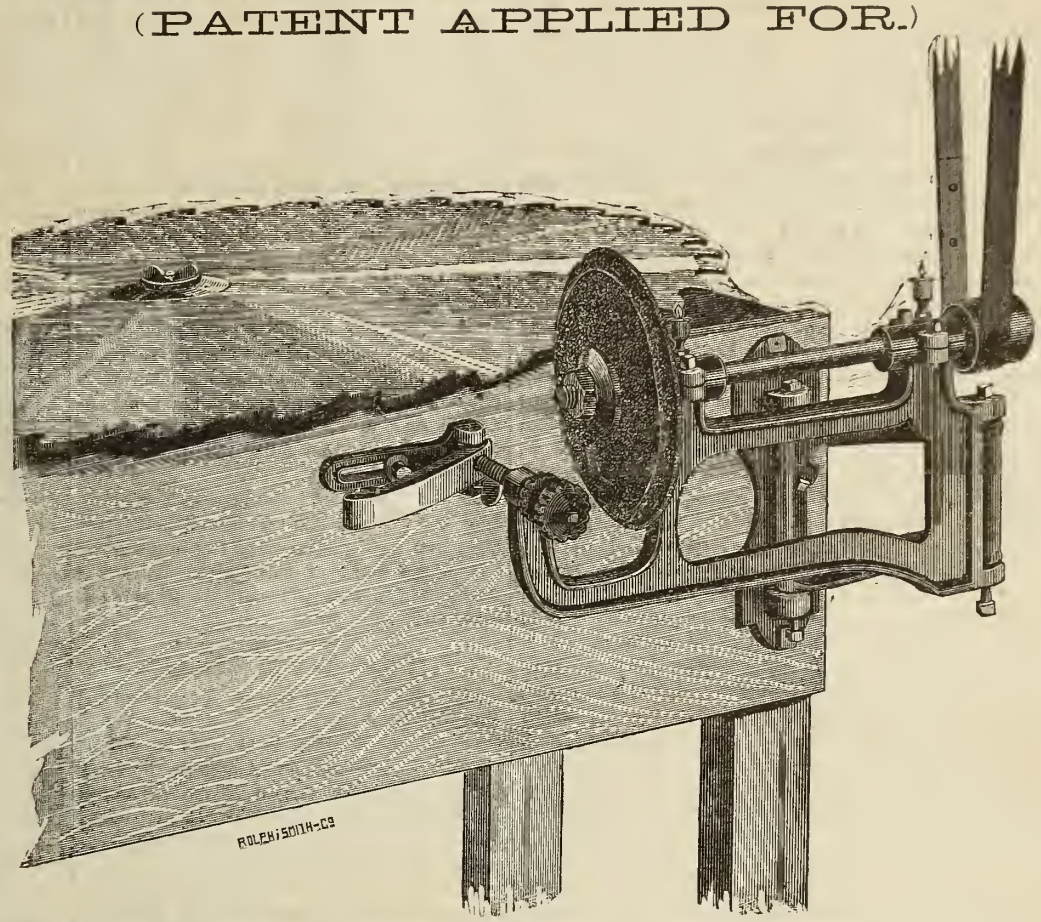
(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

Complete!

POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!

JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞ Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

BLYTHE MILLS.

Instead of grumbling about the price of wheat being always too high, and milling heing a ruined business, Mr. George Hilliard, M. P., set himself to work to find out how it was that he could not buy and grind wbeat and make something out of the operation, as well as some others were evidently doing, inasmuch as no man can or will long continue at a business in which the balance is always on the wrong side.

The investigations thus hrought about were not long in convincing Mr. Hilliard that the old system of grinding could not compete with the new roller process, which has recently heen introduced into Canada, either in the quantity or quality of flour producable from a bushel of wheat. He accordingly determined to have his mill refitted with the latest and most improved machinery for making flour hy the roller or gradual reduction process, and to this end entered into a contract with the Consolidated Purifier Company, of Toronto, who have secured control of all the most recent improvements in the flour line, for the refitting of his mill, and this contract has just been completed, and the new system put into operation hy that company.

As a result of this change three of the four run of stones recently contained in the Blythe mill (the fourth being retained for chopping purposes only) have been discarded, and in their stead there has been introduced six sets of brakes, three purifiers, a bran roll, and a germ roll, which gives a capacity of one hundred barrels per twenty-four hours. As most of our readers, no douht, are aware the great difference which exists hetween the old and new processes is that while hy the former the grinding is all done at one, or at most at two operations, by the latter it is accomplished only after from four to five separate grindings. While any attempt at a detailed description of all the operations involved and machinery required in this process, from the time the wheat leaves the bin until it is ready for market, would be tedious to the general reader, yet we think a brief description of how the best, or patent flour is ohtained will at once be interesting and give the ordinary reader some idea of the new process. The wheat, after being cleaned as formerly, is passed through three successive brakes, or sets of chilled iron rollers, each crushing the grain finer than its predecessor. As the orushed grain or meal leaves each of these brakes it passes over perforated zinc which allows all that has heen reduced to a certain stage of fineness to pass through and be conveyed to a real covered with fine bolting cloth. In this way there is gradually separated from the whole product of the wheat the best part of it, with the least possible quantity of bran, before it enters the real we have just mentioned, and in passing through which there is separated that portion which has been over-ground or killed. From this real the meal is passed through a purifier, from whence it passes through a brake with stone rollers and in which it receives its final grinding, and passes to the bolts, where it is bolted as in the old process, and the "Patent" flour is ready for the market. From this hrief statement of the *modus operandi* any one in any measure familiar with flouring operations will at once see that the patent article can hardly fail to he the very hest that the wheat can produce, owing to the system of "creaming" which has been adopted in its production. But were we to stop here many might be disposed to think that the improved quality had been obtained at a too great sacrifice of quantity. In this, however, they would be mistaken. Of course the bran, or rather meal, which has not fallen through the perforated zinc over which it has passed after leaving the first three brakes still contains a good deal of flour. This, however, is conveyed from the last brake to the "hran roll," which separates the pure hran (and those who huy it for feed will think it pure enough) from the rest which is then passed through a purifier, and a stone roller brake, thon through a set of holts which extract therefrom a second quality of flour, while that which still remains has the same process of purifying, grinding and holting again repeated to extract from it a third quality of flour. And when all this has been judiciously done it is needless to say that the "remainder" does not contain much which, by itself, will make four footed animals grow fat.

Besides the improvements directly required in connection with the manifacture of patent flour Mr. Hilliard has introduced two new packers which are easily adjusted to the packing of anything from a barrel down to a twenty-five pound paper sack.

As the more wheat ground at home the better for all of us, we trust Mr. Hilliard will not only have no reason to ever regret the large outlay which these improvements have necessarily involved, but that they will prove as profitable to himself as their success will nndouhtedly prove heneficial to farmers marketing their wheat in Peterhorough.—*Peterborough Review.*

THE MIDLAND R. R. WORKSHOPS.

From an article in the Port Hope *Guide* in reference to the Midland Workshops, we take some particulars. In the machine shops great alterations and additions have taken place. The moving of the Belleville and Lindsay shops to this place has also been accomplished, and though the appearance previously indicated that there was hut little room for much more machinery, under the new arrangements there is ample room for all that has reached here from the two shops, and apparently room for more yet. In place of lathes, planers, drills, &c., heing scattered about, they are now classified and placed in rotation according to size, quality and kind, therehy not only heing more easily reached, hut are so situated as to the very best advantage meet the demands of work. The shop has also been divided into departments, every one having a duty to perform; each of these having a leading man, and to him on the dissection of an engine is sent the work to be repaired to he done hy his men. To illustrate:—When an engine comes into the repair shop the stripping gang immediately commences its duties. After uncoupling the engine, taking out wheels, &c., &c., the different parts are cleaned. They are then distributed to the respective departments where the requisite amount of repairs are made, which on completion, the pieces are returned to the erecting shops where fitters again take hold of it, and reerect the engine. As a consequence of the hringing of the shops mentioned to Port Hope, there are now employed in the machine shops more men than heretofore. While the interests of the Company have heen effectually looked after, the comfort and health of the employees has not been forgotten, and additional windows, a new floor, and a good drainage are things of recent date. The ventilation has also heen made much better by the removal of the cumbrous partition which formerly existed. Its removal has increased the room likewise.

The blacksmith shop presents a much more cleanly appearance from a new coat of whitewash and a general renovation. The number of hands here are about the same as when Mr. Patterson came.

Business is again lively in the carpenter shop. The twelve flat cars, the order for which was countermanded some time ago, has been again given; in fact some of them are completed and others are approaching completion. Fifteen to twenty hands are now employed here.

The round house is a bee-hive of industry, as the employees are required on an engine coming in to thoroughly wipe it, take out the fires, and wash them out once a week. Twenty-five engines now come in and out for use on the Midland division alone. Each engine receives a fresh supply of coal and water before coming into the round house, and is at once ready to be "fired up" when required for a new journey.

Mr. Patterson has made another revolution in the system of government, time-keeping, &c., and while the plan is very simple, it is one whereby the most complete accuracy can be ohtained.

As we were coming away, an engine, the repairs on which had just been finished, was leaving the shop on her trial trip. As to the engines sent to Montreal, the repairs required were of such a nature as to demand larger machinery than is here to economically perform the work.

Mr. J. Storer, of Uxhridge, we understand, is to succeed Mr. Patterson as general foreman in the Midland shops, and as the last named gentlman leaves for Montreal on Satnrday, no douht the new officer will arrive by that date,

TAMARAC AND JUNIPER.

The *Northwestern Lumberman* says:—The terms tamarack, hackmatack and juniper appear to be more or less confounded, being regarded by some persons as identical. Juniper differs considerably from tamarac, but the hotanical classification groups tamarac, hackmatack, American larch and black larch under the head of *Larix Americana.* Juniper is of different classification, and manifestly of different character. *Juniperus Californica* is called a small shruh, or tree, sometimes 20 to 30 feet in height. A sub species (*Utahensis*) growing in central Nevada, and south to southern Utah is only 10 to 20 feet in height and up to two feet in diameter, frequenting elevations from 5,000 to 8,000 feet. Another species grows to a large size in Oregon, and is smaller in California, or often reduced to shrub. A suh-species growing in western Texas forms forests, and is an important timber tree, though not as large or so easily worked as the *Juniperus Virginiana*, or red cedar of the plains of eastern Texas. Tamarac, instead of habiting plains and eminences, is common to low, swampy ground, and moist uplands. As is well known, it has a commercial valuc principally for ship's knees, posts, ties, etc., while juniper has little commercial value except for fuel. In Labrador and Newfoundland the tamarac is a tree from 80 to 100 feet high, and from two to three feet in diameter, hut in the limits of the United States it is smaller and less valuable, and always grows in cold, damp swamps.

FORESTRY CONGRESS.

The following letter appears in the Montreal *Herald*:

POINTE PLATON, P. Q., July 30, 1883.

MY DEAR SIR,—The American Forestry Congress meets at St. Paul, Minnesota, on the 8th August. A number of Canadian gentlemen, from every part of the Dominion, are members of that Association.

All those among us who take an interest in forestry have felt grateful to the American Forestry Congress for having chosen Montreal as their place of meeting last summer, and the results of that meeting have been most encouraging, both in awakening puhlic interest and in stimulating private enterprise.

We, Canadians, owe it to our American friends to return their courteous visit; and we owe it our own country to join heartily in their efforts for the preservation and renovation of the forests of this continent in which we are so deeply interested. I know that some of our Provincial Governments intend to be represented at the Congress and hope the Dominion Government will not be behind them, there is so much work for the forester on our western prairies, which are now hare of timber. It has been established heyoud a doubt that timber can he successfully grown there, and we shall see on our way to St. Paul what has already been done under similar circumstances hy railway and private enterprise in the creation of new forests.

May I hope that you will exert your powerful influence in order to encourage a good attendance of Canadian members to the Cougress, and that the other leading organs of public opinion in the Dominion will join you iu that useful work.

All the American railways have been most liberal in affording travelling facilities to the members of the Congress on their way to St. Paul and back, and I feel confident that the Grand Trunk and Canadian Pacific railways will be equally liberal.

Believe me,
Yours truly,
H. G. JOLY.

Vice-Pres. American Forestry Cougress.

New Patent Wood Pavement.

Mr. Edward Hughes, of Liverpool, England, has patented a method of laying wood pavement on concrete, the chief feature of which is that a rebate is cut in the bottom edges of each block, so that when they are placed side by side the two rebates form a single dovetail Th dovetail thus formed becomes entirely filled with the material in which the hlocks are laid, forming with the bedding material one compact hard mass, from which it is impossible for any block to loosen itself. It is claimed that by this method the joints may be made perfectly close, there being no necessity for any grouting. —*Timber Trades Journal.*

Do not attempt to remain over night without a bottle of Dr. Fowler's Extract of Wild Strawherry near at hand. This is the season for Bowel Complaints, Colic, Cholera Morbus, etc., and the remedy above named is the nnfailing specific.

THERE is no excnse for snffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why snffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused hy over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE

CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

For detailed information, get the Maps and Folders of the

GREAT ROCK ISLAND ROUTE,

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FOR THE FOLLOWING REASONS:

1. It is the only newspaper published in the Dominion of Canada devoted to the lumber and timber industries.
2. It is devoted to the development and utilization of our forest wealth.
3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☛TO ADVERTISERS.

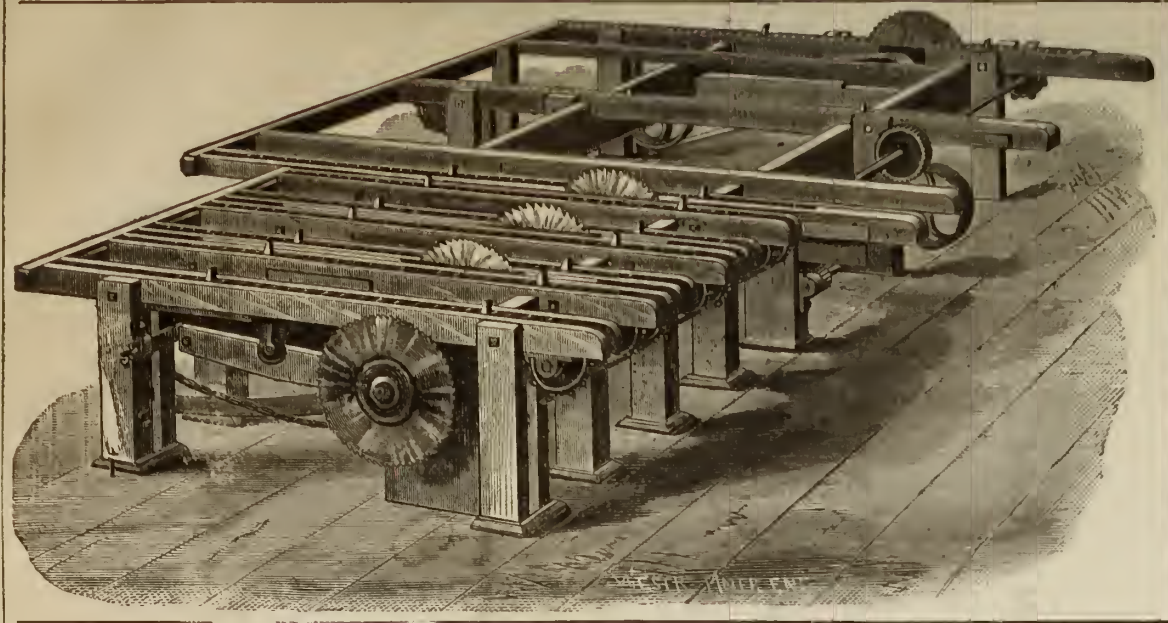
It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

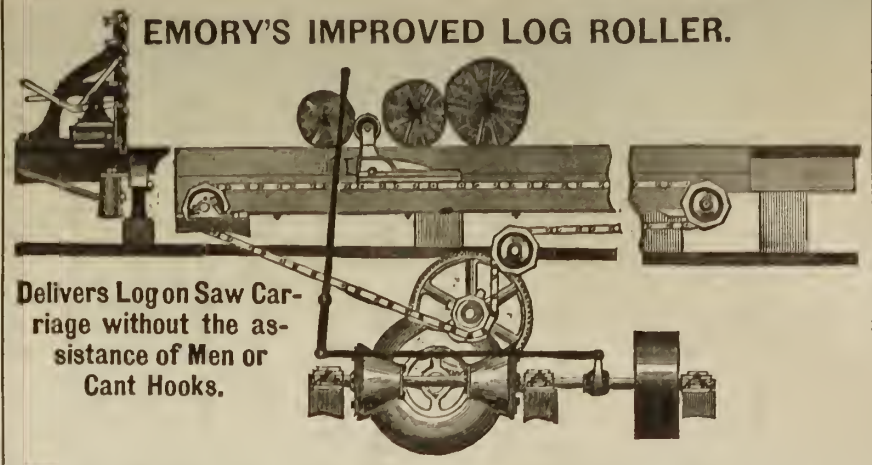
Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

———CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM———

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion.

Ewart's Detachable Link Belting and Special Labor Saving Machines for Saw Mills.



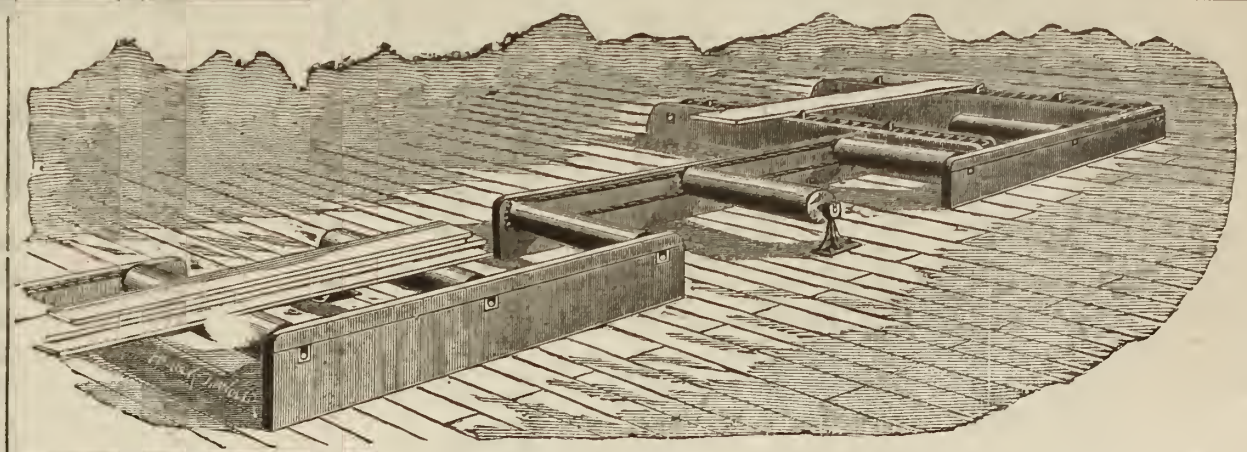


Replace Manual Labor by Automatic Handlers, made possible by Ewart's Patent Detachable Link Belting.

Full Illustrated Catalogue sent on Application.

LUMBER TRANSFERS and LIVE ROLLS

Using Ewart's Link Belting.



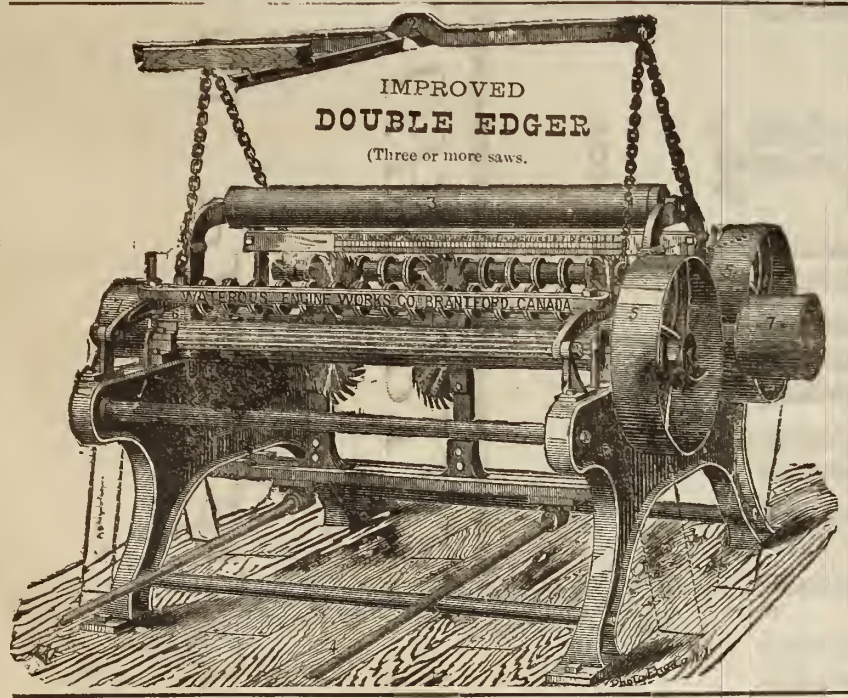
TRY THE
GANDY
BELTING FOR
MAIN DRIVERS.

6-ply Stronger than Double Leather.
8-ply 80 per cent. stronger.

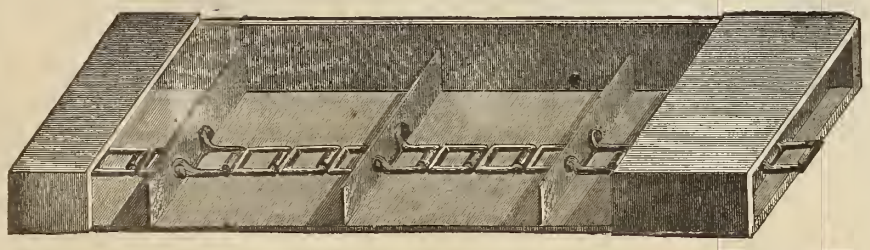
	Per ft.
14in. 6-ply Gandy	$1.40
14in. 8-ply "	1.75
Double Leather	2.88
18in. 6-ply Gandy	1.80
18in. 8-ply "	2.25
Double Leather	4.52
22in. 6-ply Gandy	2.20
22in. 8-ply "	2.75
22in. 10-ply "	3.60
22in. Double Leather	5.80

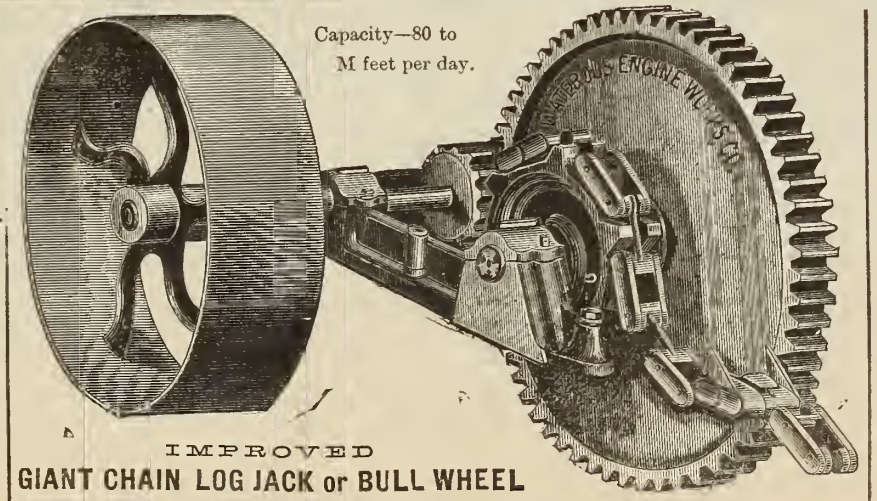
Runs perfectly true without stretching, not affected by steam or dampness.

Send for Circulars.



LIGHT and HEAVY SAWDUST CARRIERS.





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$1.40 to $1.50 per Foot.

Sawdust & Refuse Carrier Chain

16c. to 90c. per Foot.

CHAINS of all SIZES STRENGTH & PRICES.

FURNACE FEEDERS

Tie and Telegraph Pole Loaders

Etc., Etc.

High Class Heavy and Portable Saw Mill Machinery our Specialty.

WATEROUS ENGINE WORKS Co., Brantford, Canada.

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AND MILLERS' MANUFACTURERS' AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 3. PETERBOROUGH, ONT., SEPTEMBER 1, 1883. NO. 17.

AMERICAN WOODENWARE IN NEW ZEALAND.

REPORT BY U. S. CONSUL GRIFFIN, OF AUCKLAND.

Nearly all the woodenware imported into New Zealand is of American manufacture, and it is gratifying to me to be able to state that about three-fourths of it is brought here direct.

The value of the imports of woodenware into the colony of New Zealand for the year 1881 was $45.075 against $25.045 for the year 1880, an increase of $30,030. This of course, is exclusive of certain articles of ironmongery combined with wood, doors, window-sash, and all kinds of office and household furniture, such as chairs, writing desks, tables, &c. If the latter articles were included in the imports the amount would be increased to about $620,000. The woodware trade proper embraces such articles as tubs, pails, buckets, washboards, oars, axe handles, brush and broom handles, shoe-pegs, wooden screws, clothes-pins, rolling pins, butter churns, cheese molds, step ladders, bread boards, trays, platters, mallets, croquet and lawn tennis sets, chessmen, checkers, checker-boards, shafts, oak rings, felloes, poles, shade and blind rollers, &c. It is now very generally admitted by dealers and importers that, with few exceptions, all these articles can be manufactured much cheaper in the United States than anywhere else. The choicest wood for such purposes can be obtained in America at very low prices, and there is no other country in the world that has so many ingenious machines for the manufacture of all kinds of woodenware. There are several firms in the United States that have extended their trade here with very little effort.

All the adjustable wooden shades used in Auckland are of American manufacture. Hartshorn's patent shade roller has been introduced in every city and town in the colony.

GERMAN AND ENGLISH WOODENWARE.

The small fracture of woodenware imported from England and Germany into New Zealand consists of bread platters, butter prints, egg cups, forks, spoons, wooden faucets, knife cleaners (cylindrical and board), cricket and lawn tennis bats, ninepins, chessmen, checkers, checker-boards, pepper grinders, &c. Of the articles named above the chessmen, checkers, and boards come from Germany, the rest are of English manufacture. The chief characteristic of English and German woodenware is that they indicate a maximum of labour with a minimum of material, which, of course, is just the reverse of those made in the United States.

PRICES OF WOODENWARE.

The cost of freight, customs duties, and other charges make the price of woodenware here much higher than in the United States. The duty, however, on woodenware, is only 15 per cent ad valorem, and some articles, such as brush, woodware, buggy shafts, bent wheel rims, carriage shafts, spokes, felloes and naves, saddle trees, butter churns, axles, axle arms and boxes, ship's blocks, &c., are admitted free. There is no demand here for wooden buckets; galvanized iron ones are used instead.

NEW ZEALAND WOODWARE.

New Zealand has developed the largest timber industry in the southern hemisphere. The immense forests of kauri, kahikatea, puiri, and rimu, in the Province of Auckland, are fully appreciated by her enterprising inhabitants. The annual output of sawn timber in this province alone is about 70,000,000 feet in addition to 2,000,000,000 feet of planed timber, 6,500 doors, and about $75,000 worth of other products. Of the different kinds of timber for manufacturing purposes, the kauri pine is the most valuable. The kauri forests of the province of Auckland, cover over 200.000 acres, exclusive of the land still in the possession of the Maoris or natives. The kauri tree, as I have mentioned in former reports, is not found outside of the province of Auckland.

The are 43 saw mills in the province of Auckland, and about 250 in the colony. The valuo of the lands and buildings in connection with these mills and factories is set down in the last government returns at $1,885, 420. Over 8,000 persons are employed in connection with the timber industry of the colony.

The kauri pine, of which the chief products are made, is more apt to shrink than the pine imported from America. The factories excel in the manufacture of doors, window sash, and various kinds of household furniture, but make only limited quantities and to special order what is known to the trade as woodenware. Their articles of coopery are worthy of praise, especially their butter kegs, which are made of kauri, totara, and pariri (the last is known as New Zealand oak). Amongst the native woods suitable for the manufacture of woodenware may be mentioned tawa (Larus tawa,) used like ash, taraire (Lauras taraire,) white birch, rewarewa, honeysuckle (Kingthtia excelsa). These goods are used in considerable quantities for axe-handles and small cabinet work. Agricultural implements and oars are sometimes made of mangiai, but these articles are not as good as those imported from America. Mapau is another excellent New Zealand wood; it is very tough, and is occasionally used in the manufacture of carpenters' tools.

The great disadvantage the wood manufacturers experience in New Zealand is the high price of labor, and the duties charged on American pine and other timbers.

AMERICAN WOODWORKING MACHINERY.

American woodwooking machinery is employed to a greater or less extent in all the principal timber and wooden factories in New Zealand. The Auckland timber company uses by far the largest number of American machines in the colony. It would require a good size volume to enumerate all the various kinds of American machinery used in these establishments.—*Lumberman's Gazette.*

ANCIENT PLEA FOR THE FORESTS.

The *Lumberman's Gazette* of Aug. 8, says:—In the sixteenth century we find a note warning against the evil consequences likely to follow the wasteful destruction of the forests "An Historical Description of the Island of Britain, by Mr. Hamsen," given in Hollinshed's Chronicles—of which a reprint appeared in 1807. In a curious chapter on Woods and Marshes, the author complains of the rapid decrease of the forests, and adds:

"Howheit thus much I dare affirme, that if woods go so fast to decaie in the next hundred yeere of grace, as they haue doone and are like to doo in this, * * * it is to be feared that the ennie bote, broome, turfe gall, heath, firze,, brakes, whinnes, ling, dies, hassacks, flags straw, sedge, reed, rush and also seacole will be good merchandise euen in the citie London, whereunto some of them euen now haue gotten readie passage, and vp their innes in the greatest merchants' parlours. * * * I would wish that I might liue no longer than to see foure things in this land reformed, that is: Tho want of disipline in the church; the couctous dealings of some of our merchants in the preferment of the commodities of other countries, and hindrance of owne; the holding of fairs and markets vpon the sundaie to be obolished and referred to the wednesdaies; and that euery man in whatsoeuer part of the champaine soile enioieth fortie acres of land, and vpwards, after that rate either by free deed, copie held or fee farme, might plaut one acre of wood, or sowe the same in oke mast, hasell, heech, and sufficient prouision be made that it may be cherished and kept. But I feare me that I should liue too long, and so long, that I should either be wearie of the world, or the world of me.

Again, in the time of Charles II., the improtance of conserving and replenishing the woodlands in the forests, as a means of saving timber for the navy, was perceived, and were adopted accordingly. And in 1664 was published the first edition of Evelyn's Silva, a work which contributed much to the extension of arboriculture in England.

Hitherto it was chiefly the demand for wood for naval purposes which excited the anxiety of statesmen; but several authors in the 16th century expressed fear of serious evils following the wasteful destruction of woods for domestic fuel, and meanwhile there was gradually manifesting itself a new source of danger. In the forest of Dean and elsewhere, mines of iron ore were being exploited with more and more energy. For the smelting of the ore fuel was at hand, and trees were recklessly felled for the work. Coal had been found, but coal fires were not found propriate to the purpose, and the consequent destruction of the woods threatened to bring the country into a condition not unlike what is now the case in many districts of the Ural mountains in Russia—what were richly wooded lands being devasted.—[Brown's "*Forest of England.*"

ENGLISH LUMBERMEN IN FLORIDA.

The new company just promoted, says the London Timber Trades Journal, under the title of the "East Florida Land and Produce company (limited)," to acquire land in that profitable region of the great American continent, in their prospectus dwell on the large resources of timber. The property they are about to acquire contains yellow pine, cypress, orange, and other valuable wood being distributed over its surface. The swamps so intimately connected with Florida are stated to be absent from this property, which lies in the northern part of the state, the swamps being in the southern portion. The cypress is said to be very valuable for railway timber, sleepers, ties, &c., and the so-called yellow (pitch) pine, from the nature of the soil, presents a fine color. That the resources of the southern timber lands are comparatively in their infancy we have plenty of evidence of, and a contemporary, writing about Texas, says; "The timber lands of Northern Texas will be, in the course of a few years, the most valuable of any lands in the state. Lumber can be bought, delivered at our doors for $1.50 per 100 feet, while in the western counties the same will bring from $4 to $6. Thus far little timber has been culled beside the pine and walnut, while the thousand of acres of white oak ash, hickory, bois d'arc, sweet gum, etc., remain in their virginity, not a stump showing that the destroying hand of man has ever been lifted aganst them. As the state develops it is believed that these forests will necessarily be drawn upon to supply a demand for building purposes, railroad ties, etc., which the timber of the north would be totally unable to meet."

An $80.000 Fire.

RAT PORTAGE, Aug. 20.—The Rainy Lake Company's mill here was destroyed by fire on Saturday midnight. It was caused by fire working through the brickwork of the boiler-room into the sawdust. The watchman must have been asleep, as he got burned getting out. A fire caught in the same place before. Loss, $80,000; insurance, $30,000

In Olympia, Washington territory, the nights are made lurid on nearly every side by the roaring forest fires now raging in that immediate vicinity. The atmosphere is so loaded with smoke that the sun at noonday is shorn of its glare, and assumes the appearance of a great ruby in the sky. As a law has been passed whereby parties who carelessly or otherwise set fire to government timber may be punished, wouldn't an example or two cause a decrease in the frequency of forest fires?

ANNUAL MEETING OF THE AMERICAN FORESTRY CONGRESS.

ST. PAUL, Aug. 8.—The annual meeting of the American Forestry Congress commenced to-day in the capitol building, President George B. Loring in the chair. The Congress was welcomed to the state by George L. Becker, president of the State Forestry Association, and Governor Hubbard.

President Loring, in his annual address treated of the State Forestry in the United States. He stated that clearings in the old settled parts of the country were being filled up with trees, so that in Ohio, Maine, New York, and other states, the acreage of forest was constantly growing. In other states where the subject of forestry gained some attention it is also gaining. In states where an Arbor Day has been established the number of trees planted increases yearly. There is need of further encouragement of this enterprise.

Concerning the extent of forestry in the United States at present the president said the forest acreage was less than one-fourth of the total surface, a less proportion than in east, west and north Europe.

The address treated of the decrease of pino timber, showing that the supply would be exhausted in the northern states in a few years at the present rate of cutting, so that much would depend in the near future upon the pine forests of the Gulf States for lumber.

Much remains to be done for the care of forests. Much timber was being wasted for want of care in burning and cutting. Public minds should be aroused to the importance of the subject. The president indorsed the suggestion of the land commissioner in his report for 1882, in which he speaks of the difficulty of suppressing the unlawful cutting of timber, and asks for some general and comprehensive law regulating who may cut timber on Government lands, for what purpose it may be cut, and providing a penalty for unlawfully destroying forests. He pointed out the effect of the forests on the rainfall, and closed by saying the United States, which had been so busily engaged in lumbering for the last 40 years, should devote itself now to forestry.

The following officers were elected :

PRESIDENT—George B. Loring, of Massachusetts.

VICE-PRESIDENTS—H. G. Joly, Quebec ; George L Becker, St. Paul.

RECORDING SECRETARY—N. H. Eggleston, Washington.

CORRESPONDING SECRETARY—B. E. Fernon, Pennsylvania.

TREASURER—Charles Mahe, Alabama.

EXECUTIVE COMMITTEE—B. G. Northrup, Connecticut ; Marion Higby, Ohio ; J. G. Knapp, Florida ; J. S. Hicks, New York ; J. L. Budd, Iowa.

At the evening session Mr. Burson, of Topeka, Ka , read a paper on the profit of planting forest trees. He gave an example of a man investing $5,000 in 400 acres of land, the trees on which in 16 years bring a profit of 800 per cent on the sale of the trees alone.

The rest of the evening was consumed in considering the subject of education in forestry. Members spoke warmly endorsing the Ohio plan of establishing experimental stations, and having forestry as a science admitted into the common schools, and especially the agricultural colleges.

AUG. 9.—This morning the Committee on Forest Experimental Stations reported, commenting on the decrease of State forests for want of trained foresters. None were in existence. There were no forest academies, and comparatively little importance was attached to experiments in forestry. The committee recommended that members from the respective states urge the necessity of establishing forestry experimental stations ; that this congress memorialize the legislatures of the different states, urging upon them the practicability of establishing these stations ; that the Ohio plan is recommended as the most suited to our circumstances. The report also recommends experimental stations in agriculture, and that a committee on forestry experimental stations be appointed. The report was adopted.

The committee on memorializing State Legislatures upon the establishment of a State forestry commission reported a memorial calling attention to the importance of giving early attention to measures for the maintenance of forest supplies, and to the relations existing between the woodlands and the agricultural welfare of the country, water supply, etc. In view of the fact that most of the settled portions of the country are owned by individuals, the report says that the most effective way of promoting tree culture is the diffusion of correct ideas among owners of land. This end can best be achieved by the appointment of a State commission to introduce a new variety of trees, keep the people informed of the best methods of tree culture, establish nurseries and experimental stations, and holding meetings.

The Committee on Forestry Education reported that the business openings for trained foresters were not such as to encourage sufficient numbers of students to support schools in this study. They should be taught, however, in schools for the promotion of agriculture. It might be desirable for State institutions to employ lecturers and co-operate with local societies in their work. The report was adopted in connection with the following resolution, offered by Mr. Minier, of Illinois :—

Resolved,—That the Forestry Congress earnestly urge all our Industrial colleges and Normal schools to begin at once testing tree planting, and as soon as possible the introduction of both the science and art of forestry in the public schools.

The congress discussed forestry legislation. Congressman Dunnell, of Minnesota, stated that people generally did not appreciate the alarming rapidity with which the forests were being destroyed.

In the afternoon the congress discussed the importance of planting and maintaining groves of trees, and accepted an invitation from the Northern Pacific to take an excursion over the road. In the evening a committee was appointed to report at the next meeting the form of a memorial to Congress on the subject of establishing forestry experimental stations.

The discussion was continued on the need of forestry education in agricultural colleges. Also a paper was read by Professor Saunders, of London, Ontario, on insects injurious to white pine.

A resolution was adopted recommending the establishment of Arbor Day in all the States of the United States and Provinces of Canada.

Committees on Forestry Experimental stations and on Forestry Schools were appointed, and the congress adjourned.

THE CANADIAN PACIFIC RAILWAY.

A special correspondent of the Montreal *Star* writes as follows :—

The C. P. R. own two steamers which run between the "Depot" on the Spanish River and Algoma mills. One is an ordinary small tug and the other a handsome river steamer with good accommodation for short trips. Both are used to bring supplies from Algoma Mills to the head of navigation on the Spanish River, whence they are taken by teams to the various camps on the construction line. Lumber, provisions, clothes, fodder, cattle, horses, carts, picks, shovels, wheelbarrows, powder, and all that is necessary for building the line are landed at the spacious stores there to await transportation inland to various points of destination on the way. The rapids which cross the barriers of the stream a little higher up are about as large as one of the chutes at the Sturgeon, and they bar navigation to everything except bark or Peterborough canoes. The "Depot" is thus made the distributing point for the coustruction line all the way to Sudbury Junction or rather now to the Vermillion crossing, where the jurisdiction of Mr. Abbott ends and that of Mr. Worthington begins. Westward, however, there are more facilities for bringing up supplies. Here the line runs parallel to the Spanish River, and small depots have been established at intervals all along the water side. At these depots the two steamers laud their cargoes, and it is but a short distance from the different landiugs to the construction line. This is considered a great advantage by railway men, many of whom think the question of feeding the men and carrying in the supplies sometimes more serious than spanning a river or bridging a chasm. The navigation is easy, the river being free from shoals and snags, while green timber lines it, on both sides to the water's edge. Along the margin of the stream there are at places, ranges of irregular rocks, conical, table and undulating, and it is to avoid these that the railway line is laid at a little distance from the shore. There are I think between 1,500 and 2,000 men working on Mr. Abbott's portion of the C. P. R. Unlike the men at the other end of the line they all boarded by the company, and those in authority appear to think that this system secures better food and better accommodation for all. Contentment, that parent of delight, appears to be general, and it is only fair to add that the men speak in terms of generous praise of the gentleman who is entrusted with authority. But the land through which the railway runs is poor. It is nearly all marsh or rock. I only walked over a small part of it, but no attempt is made to conceal the barren nature of the soil, all along the way. It is a wilderness of boulders, turf and evergreens. Close to the margin of the river, however, I saw some fair land. Alluvial deposits have mixed with the sand, and at places give evidence of nutriment and warmth. There is, too, a flourishing settlement on the north side of the stream, and I saw potatoes well advanced and other crops healthy. On the south side we passed an Indian reserve where "Yellow Thunder" lords it over his swarthy tribe. I saw some of them at one of the landings.

LITTLE DETROIT AND WINDSOR.

We soon left the Indian reserve and the river widened into the north channel of the Georgian Bay where we were soon ploughing through a gentle swell which rocked us in the cradle of deeper and more picturesque waters. I then heard that we were to stop at Little Detroit, and we headed for some narrows where even so small a steamer as the Eclipse could hardly turn with safety. On one side of the narrows there was a store and I think a shanty—that was Little Detroit ; on the other side there was a shanty and no store and that was Windsor. People say that there are 90 fathoms of water in that narrow gut, which we soon left and stopped at the Spanish Mills a little further on. Here barges flying English and American flags attracted our attention and I was told that the mills belonged to an American firm whose timber we saw scattered over the river higher up the stream. There was a dock made out of refuse boards from the mill and which appeared to be loosely piled on each other, but which had withstood the wind and weather of the bay for many a year. Returning through the narrow channel we once more passed Little Detroit and Windsor, and we were soon treading our way through the rocky groups of the North Channel. Except an odd gull there was not a bird to be seen, and all the way from the "Depot" to Algoma Mills we only passed one boat with an Indian doctress and a sick child on board. Rocks of all sizes and all shapes stand firm, cold and weird looking, out of the water, and the spray dashed up their slippery sides and frothed and foamed in caves which they had eaten with their fury. The wind rose a little and the Eclipse rocked while the waves leaping at her weather bow made her rise with each succeeding wash and dash off the sea like a boxer warding off a blow ; and still wriggle through the islands which here are as thick as plums in a pudding.

IN THE NORTH CHANNEL.

The North Channel is the Thousand Islands on a larger scale, and while it loses some of the charms which comes from a close inspection yet it gains in magnitude and depth and greater volume. More than 27,000 islands, large and small, dot the waters of the bay between Collingwood and Sault Ste. Marie, and at places where they narrow, there is a variety and beauty of outline equal to the most attractive spots on the far famed islands of the St. Lawrence. At some places there are sharp pinnacles like the aigulets of the Alps, and at others denudation has broken the granular rock into "tors" such as may be seen on the coast of Cornwall or Devon. The rounded hills are scantily clad with vegetation, and a close inspection of the stone shows where the quartz has filled up the space between the crystals of feldspar and of mud and left impressions of these minerals on the stone. Beautiful fossils are found embedded in a limestone quarry which has been discovered on an island in the bay. They are found in masses as at Saarbuck, and some interesting remains may be dug from the stone. To our left the great Manitoulin Island looms through a somewhat misty atmosphere, and at 5 o'clock that evening we saw Algoma Mills ahead.

ALGOMA MILLS.

This is town in these parts. There are eight or ten houses, including stores, a handsome cottage for the use of Mr. Abbott, a C.P.R. workshop, a dock and wharf, and a railroad track. We are now at the other end of the iron. This is to be the present terminus of the branch line of the C.P.R. There are two docks to be built, a large hotel and a grain elevator put up, and these will give Algoma Mills an importance not possessed by any place in the region. Whether the C.P.R. will be continued to the Sault or not, no one appears to know. The company own 600 acres about the Mills, and the iron is laid about 26 or thirty miles along the road from here to Sudbury Junction. There is yet about 100 miles of iron to lay before the branch to Algoma is completed, and it is confidently expected that all that will be done and the boats running from Algoma Mills to Thunder Bay in May next. A walk along the track showed how well the ballasting had been done, when suddenly snakes ran across my path and made me experience the horrors of which De Quincy spoke when recording the visions of his opiated dreams. But the reptile is harmless. There are no rattlers here, and there is no evidence of anyone ever having been poisoned by a bite from a serpent. They are numerous but harmless. After a while one can even come to like to see them gracefully raise the body into arches and glide over the ground. The thing is as incapable of doing harm as an eel. I can understand a man skipping about when he sees a Naja in India, a crotalus in Carolina, or hears a rattler on the plains, but these little things out here are as harmless as worms. Returning to town, I see the men lounging on the wharf, and learn that some are coming to and some are going from the woods. A band of Italians headed by a bagpiper who was droning out something with no melody and but little of the harmony of art. They have come from the States and are going up the line. Not one of them can speak a word of English and they gesticulate widly as they pass along. Meanwhile the shadows grow longer, while flies get troublesome, and rather than to apply more tar to keep them off I seek my room, smoke a pipe and think of—to-morrow.

MIDLAND.

MIDLAND, Ont., Aug. 11.—The estimated loss given this morning on the British Canadian Lumber Co's mill fire is $130,000. The mill machinery and eight dwellings and about five and a half million of lumber were totally destroyed. Two hundred hands are thrown out of employment by the burning of the British Canadian Company's new mill. This was one of the most complete in the world, and had a capacity of 75,000 feet per day. The total amount of insurance is $53,000, of which the Commercial Union hold $30,000.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

Do not delay, if suffering any form of Bowel Complaint, however mild apparently may be the attack, but use Dr. Fowler's Extract of Wild Strawberry. It is the old reliable cure for all forms of Summer Complaint that require prompt treatment. Ask your druggist and all dealers in patent medicines.

THERE is no excuse for suffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why suffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

EDDY'S ENTERPRISE.

Since last November, building operations have been carried on with great energy at Mr. E. B. Eddy's mills in Hull, but till very recently the whole plan of buildings had not been decided on. Hearing that the plan for all the establishments had been settled, a FREE PRESS reporter went over there yesterday and got the full particulars about every establishment. As is well known, the match and pail factories are in the same buildings as before the fire, with some improvements made since then. With the match factory Mr. Eddy says that he can supply three Dominions, and glut the market too. The building now occupied as a machine shop will be occupied by the pail factory and the machine shop transferred to the building just west of that now occupied as a planing mill, which is 50 by 60 feet. As has been stated before, the new large mill is 120 by 140 feet, and is fitted up with two slabbers, two gangs, twin circular, two splitters, three edgers and three butting tables. The water power used in this mill is 1,300 horse power, and the capaciity is 250,000 feet every 12 hours. In arrangement this is the most complete mill in every way in the world, the logs entering the mill being turned out graded and sized, and all the old pieces are turned to the best advantage, and sent by shoots to the proper places, where they are carted away. Not a cart of any kind enters the mill, all lumber being carried out by a perfect system of rollers. Mr. Eddy is having a system of waterworks arranged by which the whole mill can be flooded by the chief watchman, if necessary, in three minutes. There are now five very powerful fire pumps, run by water, and with these, the premises always being well watched, it seems impossibe for a fire to gain any headway. Immediately north of the large mill, the planing mill and the box shop have been under way for some time, and are so far advanced that it is thought they will be ready for occupation in two weeks. This building, as all the others, is of stone, and is 185 feet in length by 60 in width, two storeys in height and covered by an arched roof which has not a pillar to support it, the immense arched trusses resting on the wall being all that hold it. On the south side the building is three storeys high, and well lighted in the lower one, a flume being on the north. The small mill to the south of the large one is 60 by 70 feet, and will be used for filling and splitting. The blacksmith's shop will remain in the building where it now is, which was constructed specially for the purpose. The foundry will be where the planing mill now is. At the west end of the machine shop is the office, under the same roof and on the site of the old office. It will be entered from Maine street and be 24 feet front by 74 deep. In this is a brick covered vault, seven by nine feet and about twelve high ; the inside of which is of half inch boiler plate iron. There will be double doors with fire and burglar proof comination locks. The vault is on a solid foundation of stone built up from the solid rock, and will be able to withstand any heat it might be subjected to. In rear of the office is a long fire proof heater, by which the offices, machine shops, and store room 110 by 60 feet above both will be heated. The store room will be used for storing the goods made by the firm. The office building, as before indicated, is two storeys in height, and will be surmounted by a mansard roof. The power used by the various departments besides the mills, is as follows ; Wooden mill. 350 horse power ; machine, 100 ; match factory, 100 ; box shop, 200 ; pail factory, 100, and small stone mill about 100. The capacity of the small wooden mill is 150,000 feet per day. With the immense establishments already erected, one would imagine there was nothing wanting, but Mr Eddy thinks differently and will commence shortly the erection of a sash, door and blind factory, 60 by 60 feet, two storeys high, at the south west corner of Bridge and Maine streets, or just the blacksmith shops.

All the above buildings are, or will be, covered by arched roofs of galvanized iron, which is more lasting, strong and better able to resist the fire than any other known. The buildings will all likely be finished by fall and will then present a great contrast, as Mr. Eddy said, to the appearance of their site on the 3rd of November last.—*Ottawa Free Press.*

FIRE AT RAT PORTAGE.

RAT PORTAGE, Ont., Aug. 20.—The new mill of the Rainy Lake Lumber Company was entirely destroyed by fire early this morning. Whether the result of accident or design cannot now be determined, but circumstances point to incendiarism as the cause. The watchman about three in the morning noticed fire in the conveyor for carrying the sawdust from the mill to the yards, and says that the fire was in the sawdust at the opening of the conveyor in the well of the boiler-house, and that on going inside he found the roof of the boiler-house in flames, rapidly extending to the mill proper, which in a few minutes became a sheet of fire. He gave the alarm to the foreman and another man who sleeps in the mill, and they had barely time to escape with their lives. The foreman rushed for the cord which blows the whistle, but found it was not there, having apparently been cut off. This gives color to the suspicion of foul play. The hose, which had been thoroughly tested and found efficient the night before, was burnt away, and was useless. No human aid could now avail to save the mill, and in an hour it was burnt the to ground. The morning was calm, and tho lumber, which was piled across a swamp at a distance, was saved. It required, however, great exertions later in the day to save it, as a storm came on and the wind was at times like a hurricane. The mill was the finest in the North-West. It had been two months in operation, and was fitted up with most approved American and Canadian machinery. Its capacity was 200,000 feet per day of twenty-four hours. The company had made over 20,000,000 logs, only a small quantity of which had been sawed into lumber. The shareholders are Hugh Sutherland, M. P., Simon J. Dawson, M. P., Wm. Buckingham, John Ross, (contractor) and James Corcoran, Stratford. The loss will be a severe one to them, as the property destroyed is not half covered by insurance, and their operations are at an end for the season. The companies who carried the risk are Imperial, Commercial Union, London, Liverpool, London & Globe, Citizens', Phœnix, of London, Queen's, Western, and British America, each $2,000 ; the Phœnix of Brooklyn and Northern each $4,000 ; City of London, $6,000. Total $30,000. The occurence is a severe blow to this place, as it stops the principal industry in Rat Portage. It throws out of employment from one hundred to two hundred men.

REVIEWS.

FORESTRY.—We have before us the August number of *Forestry*, a monthly magazine edited by Mr. F. G. Heath and published by Wm. Rider & Son, 14 Bartholomew Close, London, England. One of the contributions is by Mr. Wm. Little, of Montreal, on the subject of "The Alarming destruction of American Forests." There are many other papers on forest lore, one of the most valuable and interesting being that on "Re-afforesting of Ireland." It is a periodical that should be read by all who take an interest in forestry.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec :—

AUG 9.—Jos. Bolduc, deals, Bay St. Lawrence and Beauce.

E. C. Baker, timber, Woodfield Cove.

A. & J. White, white pine, etc., St. Lawrence Docks.

Perley & Pattee, white pine, etc., Hadlow Cove.

R. & A. Conroy, white pine, etc., Cap Rouge.

A. & J White, white pine, etc., St. Lawrence Docks.

J. & G. Bryson, white pine, etc., Cap Rouge.

Ancient Circular Saws.

That the hard basalt and granite used in Eyptian buildings of some 4,000 years ago, were cut by circular saws of some sort, is proved by recently examined specimens with the tool marks fresh upon them. The circular marks are as distinct on these imperishable stones as on a fresh pine plank. The proof of the existence of ancient circulars is curious, for that form of saw has been believed to be of modern invention.—*The Wood-Worker.*

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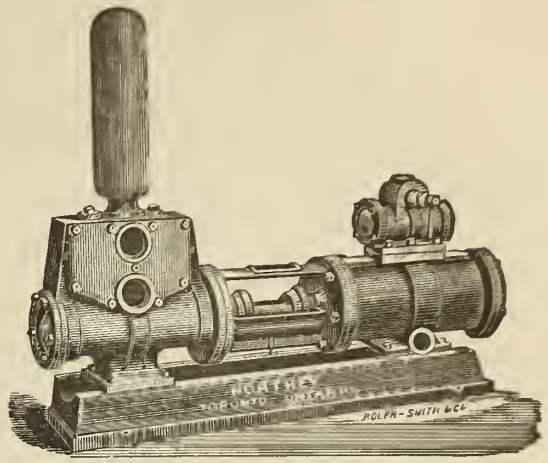

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As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

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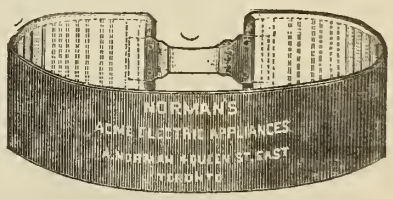

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FORESTS AND THEIR MANAGEMENT.

We continue our extracts from Mr. R. W. Phipps' report to the Ontario Government:—

FORESTS OF LUSS AND THE HARZ.

Another gentleman, M. Gustav Mann, Conservator of forests in Bengal, has proceeded to Germany for the same purpose as Capt. Walker, and gives some further important information relative to the German forests.

In the plain of North Germany the Scotch fir is the principal forest tree, and better suited for deep, loose, sandy, than for heavy loaming soil.

The great "Luneberg Heath" is mentioned as having been covered with wood, but the indifference of the inhabitants to the existence of forests, originating in the common belief that they will continue to exist, no matter how recklessly treated, the desire of the villagers to get grazing ground for their cattle by burning the forests, the indiscriminate usage of the wood and method of felling in vogue, have destroyed hundreds of miles of forest, and have left the greater part of the Luneberg Heath barren, covered almost exclusively with heather, and of little use to any one. Now the evils are seen, and with a view of restoring these forests large sums of money, and much skill and labor, are being expended.

I will quote here a short description of the method used in planting the Scotch fir in such localities. The land is first ploughed, after which a man proceeds along the bed, making holes at distances three feet by five, with a wedge spade (one quite straight, made all of wood except the edge, which is shod some inches high with iron, and is two inches thick at the top of the blade). This he forces into the ground, withdraws it, and passes on, while two women follow him, who plant by holding the seedling against one side of the hole, while with their foot they press the opposite earth against the plant. The material for planting consists of one-year old seedlings of Scotch fir, and occasionally a two-year old seedling of spruce, which are raised in the ordinary way by sowing in furrows. The Scotch fir requires more light and air than any other, and does not thrive at all in the shade of other forest trees. For the same reason natural reproduction (in forests) is very difficult, and not attempted here. As a tree affording some shade to other trees which require it the Scotch fir is well suited. If sown or planted very close, early attention to thinning out also is necessary, as plants early stunted never fully recover their strength. The soil not being rich, the trees are not allowed to grow older than sixty to eighty years, this being the age at which the comparative yield of wood is best. Spruce is planted in small numbers with the Scotch fir, and even where the soil is not good enough for it to grow up into large trees with the fir, it becomes beneficial by the cover of its dense foliage, which facilitates decomposition of the soil, and keeps it moister and cooler than the fir alone could do.

It will, perhaps, be as well here to give Mr. Mann's very lucid description of beech culture:—

Seed beds for beech are prepared in the ordinary way, and the seed is sown in autumn as well as in spring. If the former time is preferred, care has to be taken that the seed does not germinate too early, so as to be exposed to spring frosts. This is prevented by covering over the beds after the surface gets slightly frozen, and by removing the covering in spring so late that the young seedlings have nothing more to fear from the frost. If sown in spring, the seed has to be carefully stored during the winter. Steaming, as well as excessive drying, must be guarded against. The first is avoided by turning over the seed or even keeping it spread out; the second by slightly watering it and turning it over afterwards, so as to distribute the moisture equally. A cool, moist room on the ground floor is preferable to a warm dry one.

From the seed beds the plants are either removed at once into the forest, or into other nurseries for transplanting and keeping until they reach a height of three or four feet. If they are to be planted in open ground, without the protection of old trees, they are sometimes kept in the nursery until they reach a height of ten or twelve feet, which however is a very expensive measure. In this care is taken that the young shoots are not removed from the stem, as the bark of the beech is very easily burnt by the sun, and otherwise apt to be damaged by the weather. Unnecessary exposure of the roots of the young beech is carefully avoided, as they are sensitive, and demand special care during the removal of the plants. Where it can be done some of the soil is left on the roots for the same reason.

Ordinarily the beech forest trees get re established by natural production, *i. e.*, the shedding of seed from old trees. When the beech gets mixed with other kinds, as in the coppice with standard, its regeneration is furthered or checked according to circumstances, but planting is seldom resorted to.

In the pure, high forests of beech the natural reproduction is brought about by gradual and well considered fellings, which tend to effect this as completely as possible. In hilly or mountainous localities fellings are commenced at the top of the hill. These fellings take place when the trees have reached maturity, and are three to four in number, and distinguished according to the immediate effect they are intended to have on the forest.

The first felling called in Germany the preparatory cutting, is intended to facilitate the decomposition of the dry leaves and branches which cover the surface, and thus prepare it for the reception of the seed, which latter, without this precaution, frequently germinates without being able to penetrate with its roots the comparatively hard and leathery leaves lying on the surface, and often dies in consequence, while weeds and scrub easily get up in it, and cover the surface soon, thus adding to the difficulties to be overcome by the young plants. It is commenced several years before the intended regeneration, and carried out gradually; but where the air and light thus admitted are not sufficient to render the surface fit for the reception of the seed, a timely permission to villagers to remove some of the dead leaves is resorted to. Besides the preparing of the soil, this opening out of the forest induces the tree to flower and bear seed more frequently than when standing very close.

The second felling—the so-called seed-cutting—is carried out as soon as the bearing of the seed becomes probable, which can be judged of beforehand by the appearance and shape of the buds during the preceding winter. An abundant seed-bearing season generally occurs with the seed after longer or shorter intervals, but sufficient seed for the regeneration of the forests may be reckoned on every second or third year. Precaution is used not to remove too many trees at once, as in the case of the flowers being destroyed by spring frosts or other causes, the restocking of the ground with young plants does not succeed. Too much light would dry up the surface of the soil, and induce the weeds to overrun the ground, both circumstances seriously interfering with the germination of the seed at a future season. Where at this time the suitability of the soil remains doubtful, a timely loosening and preparing of it in stripes and patches is resorted to to insure success.

When the expected seeding of the trees turns out a failure, further clearing is carefully avoided, to prevent the deterioration of the soil or overgrowing with weeds. If, however, the season is a favorable one, and produces sufficient seed, and the young plants germinate, this felling is soon extended to a greater number of trees to admit more light and dew to strengthen the young plants.

For the purpose of getting the seed worked into the ground, herds of swine, cattle, etc., are often driven through the forest with good effect.

Seed beds are sometimes established in the neighborhood of a forest at the same time, to furnish young plants for the filling up of vacancies, which, however, are also obtained nearly as good out of the forest itself from places where the plants stand thick enough. Although the aiding of the natural reproduction by artificial means, either sowing or planting, is at the present time generally resorted to at once, as such measures always lead to a more satisfactory accomplishment of the desired regeneration, and save time.

The third felling is called cutting for light, as its chief purpose is to admit light and air in greater abundance as the young plants require it. This is generally commenced when the seedlings are two years old. It is also regulated very much by circumstances, and while in the one case the forest trees may be required longer on account of the spring frosts, so very injurious to the young beech, in others their early removal is necessary, even if an increase in size be sacrificed, for the establishment of the young trees. Neither do partial failures prevent the removal of the old trees, but are resorted to at once by sowing or planting as the safest and quickest mode of securing the establishment of the young forest.

After the third or light felling follows the gradual removal of the old trees, or final clearing, which is regulated in the first instance also by the requirements of the young trees, and after this by the fixed yearly out-turn, as laid down in the working plan. As a general rule, all these fellings are carried out gradually, without causing sudden changes in the forests. The aiding of natural reproduction is either accomplished by sowing, if failures are perceptible early, such as non-germination of the seed or death of the seedlings; or by planting, if the seedlings get destroyed later by spring frosts or are choked by weeds. The sowing is carried out in the forest in strips two feet wide, in furrows, or in patches two to three feet square, prepared by hoeing for the purpose, and by loosening and levelling of the soil; while planting is done by seedlings two to three feet in height taken from adjoining nursery beds, or from spots in the forest where there are more than are necessary.

"It is evident," says Mr. Mann, "that if, with all this care and attention to aid natural reproduction, still occasional failures occur, how unreasonable it is to expect forests in India to keep in an equally rich and thriving condition when left to themselves, or worked only with a view of extracting the timber from them." I would also apply the remark to Canada, and observe also that Captain Clarke respecting India, and the Hon M. Joly concerning Canada, make precisely the same statement, to the effect that the forests in both countries, cut over and carelessly managed, are often, so far as any available supply of good timber is concerned, only in appearance.

It may be noticed that the beech of all other trees, is said to improve the land, forming a rich vegetable mould, to gain the benefit of which other trees—oak, ash, maple, larch. Scotch fir—are planted among the beeches and do well. I may notice here that in Canada, while clearing the forest this did not appear to me. I generally found the maple on the richest land, and where beech were intermixed a lighter loam.

One description of forest much used in Germany is called "Middle Forest. It contains a number of high trees cut at long intervals for timber, and below them a coppice (smaller trees growing from roots of previously existing trees, and which will themselves, when cut, be succeeded by similar ones) cut at much shorter periods for firewood. In cutting the coppice, young trees are left to replace the tall ones when cut.

A method of planting used here should be noticed. A small spade of solid iron, about 20 pounds in weight, 14 inches long, seven inches broad at top, five at bottom, with a handle four inches long, is driven in the ground and bent to all sides then drawn out. The plant, three or four years old, of beech, spruce, or oak, etc., is dipped into a thin mixture of loam and water, which adheres easily. In this state it is pushed with its roots into the hole as far as possible, and with continual shaking, by which the roots get straight right down into the hole, drawn up to the level at which the plant should stand. Here it is held by one man, while another drives in the spade a second time, about three inches from the first hole and parallel with it, and first presses with its point towards the first hole, and then with the broader part, by which means the plant gets very firmly pressed into the soil. If necessary the spade is driven in a third time, to close up the second hole slightly. The soil is then beaten firm with a mallet all around the plant, but not striking closer than three inches. This mode is very successful; it is carried on without preparing the soil, and answers in stony ground, on account of the strength of the spade.

On the Harz Mountains (the scene of many a supernatural legend) are vast forests of spruce, kept with much care. One remarkable point in the management is the Government seed-drying kiln at Westerhof, for getting the spruce seed out of the cones and cleaning it of wings, which is carried on here extensively, the spruce being plentiful, of excellent growth, and producing exceptionally good seed. The cones are collected by contract work, and varies according to the seasons, if plentiful or otherwise, and generally enables the workmen to earn 50 cents to 75 cents per day. After all the Government stores are filled, private persons are allowed to collect, for which the person has to pay a small sum per season. In the cones the seed remains good from seven to eight years. The Government kiln turns out about 180 cwt. per season, while private parties in good seasons have turned out as much as 1,600 cwts. besides. The cones, when first brought in, are stored in large rooms, with perforated walls, so as to admit a free current of air through them.

The kiln itself consists of three rooms, the centre one of which is heated by means of a large oven, from which large iron pipes, six inches in diameter, pass twice through the room before they enter the chimney. This room is separated by walls, in which there are holes of nine inches, from the two outer rooms, in which the cones are being dried. By means of these holes, which can be closed at pleasure, the temperature in the drying room is regulated, and kept between 122 and 128 Fahrenheit. The drying is done in large wire dums, out of which the seed falls on the floor of the room. There are twelve in each room, and are turned from the outside of the room, where it is cooler. They are filled in the evening, the temperature got up, and so left for the night. The next morning the fire is lit again, and the drums being turned every half hour, by night the cones are empty. Half the cones are used to heat the kiln; the rest sold for fuel. It costs the Government about six cents per pound. What is not needed is sold at nine.

It is noticeable that the spruce wood, among other uses, is ground up into pulp for paper manufacture, several mills in the Harz Mountains being employed in this manner. It might be worth consideration whether, under an improved system of forestry, the waste wood left in such quantities in hewing and score-hacking could be, in our great Canadian spruce forests, so employed.

It will be well to give an account of the method of reproducing and caring for spruce forests, both because our own forests will soon need replanting, and to give some idea of the care taken in maintaining woodland property in foreign lands.

Natural reproduction of the spruce is seldom attempted, as too slow and uncertain; but if there are thriving naturally some clumps of any extent, they are kept up. Almost all spruce forests are regulated high forests, with complete clearings, either re-sown, which is still preferred by some, or planted, which is by far the most general mode of establishing or re-establishing spruce forests. If sown, lines about two feet in width are prepared by clearing the weeds, etc., off the ground, and placing this at edge of the lines to prevent the wind blowing among the seed, or rain washing them off. The soil on these strips is sometimes loosened and left as it is if the seed is to be sown broadcast. If the seed is sown in rows, small furrows are made. Between the strips, ground twice as wide is left. For plantations, the seed is sown in seed-beds, which are good, even, and sheltered pieces of land, about half an acre in size, and well dug up, afterwards levelled and occasionally slightly manured by the ashes of the weeds, remains of wood, etc., collected on the surface, brought together and burned, and afterwards mixed with the soil. These seed-beds are usually in the immediate neighborhood of the ground to be planted, and have to be fenced in. If the seedlings, after they are three or four years old, have to be removed from here at once to the spot where they are to remain, the seed-beds have to be larger, especially if the young plants are to be planted out in numbers,

i. e., three or four in one hole. In the latter case the seed is sown generally in furrows, one foot apart, as being more convenient, and requiring here in the hills about seventy five pounds of seed for half an acre, which is sufficient to plant fifty acres of forest. The better plan, however, is to have the plants from seedbeds, after they are two years old, transplanted singly in a nursery at about seven inches distance, where they remain until they are four or five years old; this, however, requires as much space again for the nursery as for the seed camp. Not unfrequently four to six year old seedlings are taken from the adjoining forest, where they are generally so close as to permit of the removal of many of them; and this is the most inexpensive way of procuring seedlings in limited numbers. Where there is a demand for thinnings, the planting of three or four plants in one hole recommends itself. If it is likely that the ground get run over rapidly with weeds, or the soil dried up by the sun, the replanting is done as soon after the removal of the old forest as possible, whilst where the danger from insects, especially the small beetle, is great, the ground is let lie two or three years first. Planting is done in autumn as well as in spring, but the latter is preferred. Spruce is planted four or five feet apart.

To protect the spruce forest against damage from insects the forester has to be constantly on the alert, as they are many, and if not checked in time, great damage is done by them. The most destructive noticed was the ordinary spruce bark beetle, which attacks the bark of living trees, and had, in some of the localities visited by the commissioner, destroyed so many trees that, when the diseased were removed the forest had become so open that the wind would soon have removed the rest had they not been felled. Experienced men are told off to guard against this danger, by going through the forest to search for the trees attacked by the beetle, and fell and bark them to prevent the spreading of the insects. In most cases, they are quite able to hold the insects in check. These generally attack trees loosened in the roots by wind, known after the beetle gets in by their foliage turning yellow. In spring, when they are worst, healthy living trees are felled at the southern margin of the forest in sunny spots, for the purpose of attracting the beetle. Such trees are often full of them three or four days after being felled. The trees attacked are barked, which destroys the larvæ if not too far advanced; if so, the bark is burned. To prevent any escaping while barking, a cloth is spread under the stem. The timber beetle, which attacks new felled trees, going deep into the wood, is also common there, and is watched for closely. For the young plantation of spruce the first mentioned is the most dangerous, as it eats off the bark above the roots, and kills the tree. Fresh pieces of bark a foot square, inner side down, are laid around before or after planting. The beetles go under, and are caught and killed. The bark is examined every morning.

To be Continued.

TRADE IN PREPARED LUMBER.

There is a boom in the lumber trade of Goderich, and dockage facilities are greatly in demand. Are our lumbermen making a bid for the new trade in prepared flooring that has sprung up in England? It is the custom there to saw out a bill of lumber to order from the raw material in the shape of deals. Recently a sample cargo of prepared flooring was received in London, and bought by some merchants of a speculative turn. At present this trade, should the English dealers tackle kindly to it, gives a prospect of being chiefly controlled by the Swedish and Bothnian dealers. In this connection, the question arises as to how Canadian dressed and matched flooring would fare overthere. Such exports are already proposed among American dealers. How many obstacles there are in the way has not yet developed, but if the cost of yellow pine flooring, dressed and matched, is not excessive, when laid down across the water, it ought to compare favorably in quality and service with the foreign prepared article, since in what the preparation consists is a rather obscure proposition. The question of superior manufacture is an important one in this country, and doutless is in England. Canadians are already exporting ready made dwellings, doors and sashes; some going to Manitoba and others to the West Indies. Should there arise a trade with Great Britain in prepared lumber, in this country, it might be the means of adding largely to an already great and profitable industry.

THE REVIVAL OF CHERRY.

Those to whom fifty years is a memory readily recall the cherrywood tables, bureaus, drawer chests, that were then in fashion, when the more gaudy and more costly mahogany had but lately come in. It is an evidence of a return to good taste that the cherry tree is again in favor, not only as it exists in old furniture, but in its new requirements. It is largely used in cases for musical instuments—melodeons and organs—and in furniture—chairs and tables—after being "ebonized," or blackened by acids and dyes. But it is also coming again into use in its natural color. One of the finest banking houses in the Eastern States is finished entirely in cherry and it is beautiful. The wood, filled and not varnished, has a soft glow not possessed by any other, and has none of those distortions of grain that are so unpleasant in mahogany.

The timber is chosen from the wild cherry, which in New England and the North generally does not usually grow to a girth of more than twenty inches, but in some of the Western States and in the South frequently attains a diameter of twenty-four inches. The domestic fruit cherry gives some good specimens of small timber, but as the tree is rarely sacrificed until it is past bearing and is decayed, this source of supply is precarious. Like all close grained timber, the best specimens are those which grow singly in exposed situations and not in a dense forest. The facility with which cherry can be worked makes it a favorite with the cabinet maker.

A NEW INDUSTRY.

Under this heading the St John *Globe* reminds its readers that there is an extensive demand in theMediterranean for hardwood box shooks, birch and maple. and a large and growing trade is being done by Bangor in them, that city ships over $60,000 worth a year. The shooks shipped from that port are manufactured in the northern part of Maine, and this is an iudustry to which some New Brunswick people might turn with advantage. The supply of suitable lumber is abundant enough. Indeed, every year, says the *Globe*, thousands of dollars worth of hard wood, fit to be made up into shooks, is burned up in the process of the clearing land. "If mills were erected in the interior of the Province for the manufacture of shooks and other articles of commerce from hardwood, a great impetus would be given to the settlement of new land, as one of the obstacles at present is the disposal of the hardwood trees, in any other way except by burning them. During the time the iron mines of Carleton county were in operation the demand for charcoal led to the clearing of immense areas of new land, and gave Jacksontown and the adjacent districts an impetus, which made their agricultural progress very remarkable. A similar effect would be produced, though, perhaps, in a less degree, by the erection of mills for the utilization of the different varieties of hardwood

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THE fine forest along the Adriatic at Ravenna, Italy, celebrated by Dante and Byron, and which furnished the shipyards of Rome and Venice, are to be cut down, because an excavation for a railroad has so drained the soil that the trees have died.

IF you would escape the ravages of that scourge of the summer season, Cholera Morbus, keep Dr. Fowler's Extract of Wild Strawberry at hand for use. In that and all other forms of Bowel Complaint it is infallible.

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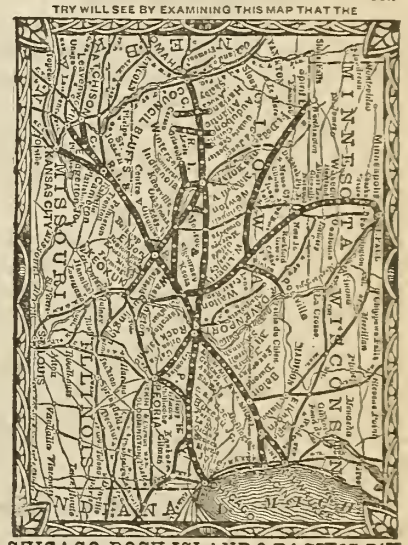
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co, 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., SEPT. 1, 1883.

IT is estimated that 58,000,000 trees have been planted in Nebraska, which cover 100,000 acres of land.

H. HOWARD & Co., Port Huron, Michigan, are filling a large order for sawed timber to be used in the locks of the Welland canal.

SEVERAL million feet of logs belonging to Thomas Nester are hung up on Baraga stroam, in Baraga county, upper peninsula, Michigan.

LUMBERMEN in Ottawa are all extending their piling grounds. Trade is very dull, but they want to cut the winter's log harvest and require more storing room.

A 7,000 000 drive from Otter Tail Lake, Minn., has arrived for Messrs. J. R. Sutherland & Co.'s mill, St Boniface. This, it is believed, is the largest drive that has ever arrived there.

A 7,000,000 drive of lumber from Otter Tail Lake, Minn., has arrived for Messrs. J. R. Sutherland & Co.'s mill, St. Boniface. This, it is believed, is the largest drive that has ever arrived here.

RAT PORTAGE council has passed a by-law bonusing the Rainy Lake Lumber company $15,000 towards erecting a new mill. The company promises a better mill than the one recently destroyed.

A LARGE toothpick factory is to be started at Harbor Springs, Michigan, that will consume the poplar and birch that grows in Emmett county. Eight or ten men, and 15 to 20 boys and girls will be employed.

A KINGSTON gentleman thoroughly conversant with the subject gives the following estimate of the value of the timber production in this district, which has been developed by the local railway:—Square timber, $50,000; sawn lumber, $75,000; other products, such as wood, ties, telegraph poles, saw logs, shipped to other places, etc., $25,000. Total, $150,000. This is nearly all shipped to Kingston, and has been added to the trade of the city during the last two years.

In a list of the rich men of Eau Claire, Wis., appear the names of W. A. Rust, $450,000; J. S. Owens, $150,000; three Rust brothers, $300,000. These are all lumbermen. The Rust brothers and J. S. Owen formerly resided in East Saginaw.

THE Selkirk correspondent of the Winnipeg *Commercial* of Aug. 21st, says:—The North-West Lumbering Company are sending large quantities of lumber to Winnipeg. One day last week they shipped twenty cars over the new railway.

MR. HERMAN COOK, of Quebec, has sold to Mr. A. T. Townhouse about 350,000 feet Michigan board timber, 22 inches average, at something over 38 cents. A lot of Chaudiere pine deals has been sold at $106, $32 and $25, 75 per cent. regular and 25 per cent. under size.

S. J. MURPHY, of Detroit, has just consummated the purchase of 40, 000 acres of timbered lands on the eastern slopes of the White Mountains. The price paid is said to be about $1 per acre. The timber is largely spruce, inferior to pine, but available as the latter becomes scarce.

A SHIPMENT of 300 bushels of red oak acorns has been made to Germany for planting on untillable lands and hillsides. This tree has been found to do well in Europe, and its wood is thoro considered to be very valuable. The acorns for shipment were gathered in Missouri at an average cost of $1 a bushel.

THE *Canadian Manufacturer* says:—The supply of standing timber on the Pacific coast is large, and soon supplies for the Prairie country will be carried east, in Canada as well as in the United States. The product is now ten million dollars worth annually, of which British Columbia may want perhaps half a million's worth.

THE destructive tornado that swept over the country in the vicinity of Rochester, Minn., August, 21, demolished John M. Cole's large planing mill at Zumbrota. Mr. Cole, the proprietor, was passing from the mill to his residence, when he was caught by the wind, carried several rods, and dashed to the earth a mangled corpse.

WILLIAMS BROS., Manton, Wexford county, Michigan, manufacture harness hames out of tree stumps, the crook of the roots forming a natural crook of the hames. The stumps are cut just above the ground, including the crook, but avoiding the grit of the ground. The enterprise is said to be profitable both to the manufacturers and stump owners.

THE Minuedosa correspondent of the Winnipeg *Commercial* of Aug. 21, says:—Jermyn & Bolton's saw logs are now all down, and their sawmills will be run night and day for the remainder of the season. In anticipation of the introduction of pine lumber as soon as the railway is completed, the lumbermen here have arranged a new schedule of prices averaging about $6 per M less than the one hitherto in force.

IN a white oak log over 3ft in diameter, which was sawed up lately in Sauer & Baird Bros. saw mill, Plattsville, a two inch oak pin was found, and that pinned to the tree again with a § pin, the whole had again been overgrown with solid wood five inches. It must have been put in a good many years ago. The hole was bored with a pot augur, the point showing very plain yet. The tree was cut on the farm of Thomas Bond, of Brantford.

THE *Northwestern Lumberman* says:—Hardwood flooring is being used in Massachusetts factories instead of southern pine. In the Flint mill, at Fall river, 300,000 feet has been used, and in an addition to the Pacific mills at Lawrence, Mass., as much more is being put in. Hardwood, like stone, for building purposes to which it is adapted, will always hold its own against all rivalry, and the owners of good hard wood in the tree should remember this and withhold the axe and firebrand.

THE *Northwestern Lumberman* says:—They tell a joke on a tug captain at Cheboygan, Michigan. He wanted to tow a boom of logs down the river during the night. The boom boys objected to the night work, and when the captain insisted and handed the crew the towline, they fastened it around a solid spile instead of to the movable boom. The tug pulled and puffed all night without budging an inch. A captain that would tug at a fixed post all night like that must have "spiled" considerable bad whisky.

THE *Canadian Manufacturer* says:—It is rightly pointed out by several of our contemporaries that Canada, a large exporter of lumber, exports far too much of it in a condition nearly approaching the natural one. Much of what we send over to England in the shape of deals and square timber ought to go as planed flooring and boards; and no small quantity should go as doors, sashes, and frames. The men and the machinery for this business we have in plenty, but the necessary money and enterprise appear to be holding back.

THE Ludington *Appeal* says that the largest logging contract ever made in those parts was consummated last week between the Danaher & Melendy Lumber Company on the one side and J. S. Stearns and John Dolan on the other. By the terms of the contract Messrs. Stearns & Dolan agree to put into the north branch of Pere Marquette river during the next three consecutive years 30,000,000 feet of logs, from a tract of land owned by the D. & M. Co. on sections 16 and 17 t. 17 n., r. 14, in Lake county. The consideration for performing the work is in the neighborhood of $20,000.

THE *Northwestern Lumberman* says that Henry Gamble, at Grand Marais, Schoolcraft county, upper Michigan peninsula, has dug a canal two miles long, as an outlet for Gravel river logs. He formed the canal by first dredging the channel, after which piles were driven 10 feet apart to a depth of eight feet. Brush was then laid between the piling and bank, slanting a little down stream, on which an embankment of earth was thrown. Boom sticks were chained along at the side, in a manner to permit them to rise and fall with the water, for the purpose of keeping the logs on the way down from sticking and impairing the embankments. The canal will hold from six to eight feet of water. The logs from Gravel river are flooded out through this canal into the bay for boomage.

MR. HUTCHINS, of Montreal, is now at Bolton Centre, examining facilities and supplies which may exist in the line of birch, maple, basswood, and some other woods for the purpose of manufacturing barrels, kegs, etc., also of veneering, for which purpose a company has been formed, who are making a preliminary examination of the material and facilities, as well as inducements to be had at the different sections in the township. Roxton Falls has offered the company exemption, from taxation for ten years, three acres of land to build on and possibly other good things, but unfortunately the best kind of timber is not to be had there although the other facilities are acceptable. The central point appears to rest between Bolton Centre and Eastman. Mr. Hutchins states that when his machinery is in full operation it will cut about one million feet of lumber per annum, which is to be manufactured into barrel kegs and veneering of various kinds and patterns for the Canadian market.

THE LUMBER TARIFF.

Elsewhere we make room for a lengthy letter, addressed to Sir John Macdonald, on the subject of protection to the lumber trade, which will no doubt be read with interest, even by those who, like ourselves, cannot indorse all the views of the writer.

TREE PLANTING.

The following letter appears in the Toronto *Mail*:—

SIR,—As farmers and others owning large tracts of land are beginning to seriously consider the necessity of planting trees for timber, the first thing to consider is what to plant, and therefore I wish to show the merits of the European larch. The larch is a cone bearing tree, belonging to the pine family, but differing from that genus in the annual shedding of its leaves. It is a native of Switzerland, growing principally in the Alps and Appenines. We have two natives in Canada, larch microcarpa and black larch (*L. Pandula*), commonly called tamarack or hackmatack, growing mostly in swamps, and for this reason they are not so suitable as the European larch. I will give some idea of its value as a tree for timber. The larch was first introduced into Scotland in the year 1738, when eleven plants were given to the then Duke of Athol, who was so pleased by the rapidity of their growth and the quality of their timber that he afterwards planted thousands of acres. In the year 1744 a small plantation, of some twenty trees were made at Blair, and in the year 1804, sixty years after, their average girth at 3 feet from the ground was from eight to ten feet. The total measurement of this lot of twenty-two trees was 2,645 feet, which, if placed at the moderate value of fifty cents per foot, would give $1,174. If from four to five hundred could be grown to the acre, then the timber would be worth from $16,000 to $20,000 in 60 years. It must be remembered that the larch can be grown on the poorest land, in fact on land that would not grow enough pasture to feed a sheep. Being a close observer of the merits of the different varieties of trees or timber, I think I am safe in saying that there is no tree that grows equal to the larch for quick growth and durability of the timber. While the heart wood is not formed at all in the other resinous trees till they have lived some years, the larch, on the contrary, begins to make it as soon as planted. To prove the durability of the larch as timber, several experiments were made on the banks of the River Thames, posts of equal thickness, some larch, others oak, being driven down, where they were alternately dry and covered with water by the effects of the tide, a most trying test for timber. The oak posts decayed, and had to be renewed twice in the course of a few years, while those made of larch remained altogether unchanged. Larch is largely used in ship-building; in fact, it is the principal timber used in both naval and mercantile dockyards in Scotland. Larch is propagated by seed, which the trees furnish in great abundance.

Should the Government wish to encourage tree-planting, perhaps the best means that could be employed would be to get seed and establish nurseries to raise the stock for planting. It takes about three years to raise plants from seed large enough for transplanting. It takes about three years to raise plants from seed large enough for transplanting, hundreds of thousands of forest trees are annually sent out from the Grant Edinburgh nurseries, and I do not suppose there could be got enough suitable plants in all the Canadian nurseries to plant a five-acre patch.

Yours, &c.,

ALEX. ROBERTSON,
679 Yonge stree.

Toronto, Aug. 22, 1883.

THE OUTLOOK AT PHILADELPHIA.

A very encouraging outlook is presented to lumber dealers by the increasing number of building permits taken out in the city for buildings, large and small, dwelling houses and shops. The industries are expanding, and a large volume of business will be transacted, in spite of much talk to the contrary.

The railroads are making heavy improvements, all the way from bridge building to station houses. Large contracts have been made lately for Virginia oak ties, which are in special request in this section. A few parties have invested in timber lands along the lines of Virginia railroads, with a view to an early rapid development to meet the enlarging southern and northern Atlantic coast demand. Two or three of our larger firms are now making heavy deliveries to New York roads, and some specifications are coming to hand for next spring delivery on account of Pennsylvania and Maryland railroads.

Railroad companies are likely to be as large buyers next spring as they were last year,

Vanderbilt has 400 miles of road under construction, practically. Garrett is about placing grading contracts for his proposed Baltimore & Philadelphia road. Besides this, between 400 and 500 miles of road are projected. Ship timber is under heavy contract for fall work, and deliveries this month are larger than usual. Houses are wanted everywhere. Contractors are busy, but yardmen are making bitter complaints against the former, who buy from first hands. A good deal of building is being hastened to completion in Chester, Norristown, Reading, Pottstown, Coatesville, Camden and in a dozen smaller towns.

Some large transactions have just been closed in yellow pine. Freight rates are from $6 to $6.50. There is more enquiry, and heavy consumptive requirements are in sight. Prices are stationary. Oak is strong, and good qualities in active demand for August, but some sales show sellers ready to sacrifice for cash.

Walnut is scarce. Some parties who have large tracts will not cut until prices are better. Kentucky shipments are light. Some buyers are prowling around through Indiana. Some parties here needing money are selling walnut cheap—cheaper, in fact, than it can be replaced, according to all indications.

Mahogany is a coming wood among the furniture men. The leading dealer reports sales in one month now to exceed those in six months a few years ago. Mexican mahogany is coming in in larger quantities, and some large orders have been recently secured for winter and spring deliveries. Stocks are increasing.

The scarcity of good cherry is still spoken of. Nothing new is to be said as to poplar, ash and hemlock. Williamsport white pine men are holding for good prices. Hemlock shipments will be large during September. Several yard men are rearranging to accommodate larger supplies. Lath are active and scarce—Spruce is quiet. There is on all sides a confidence in an active fall.—*Northwestern Lumberman.*

ALPENA ALLOTMENT.

A correspondent from Alpena, to a Saginaw newspaper, states that the mill men there, as well as at Tawas and Au Sable, have determined to hold their Norway logs for the present, as they are dissatisfied with prevailing prices. It has been observed all the season that more than the usual Huron shore Norway was being offered on the Chicago market, and latterly it has moved off rather slowly at slight concessions, since shippers to the West prefer white pine dimension to Norway, on account of the difference in weight. It is stated that the mills at Alpena have, as a rule, sold close up to the cut, so that the determination to hold the logs is for the purpose of avoiding cross piling, as would be necessary if the mills were kept running on Norway logs. The Prentiss Lumber Company has this season sold 5,900,000 feet of lumber ahead of the cut. The entire cut of the season by W. H. & E. K. Potter's mill has been sold and is being shipped as fast as cut, 5,000,000 feet having already been shipped. Fletcher, Pack & Co., last week sold to Ohio parties 400,000 feet of Norway strips at $11 a thousand. W. L. & H. D. Churchill lately sold to Chicago parties 2,000,000 feet of white pine at private terms. The Minor Lumber Company last week sold to Chicago parties 1,000,000 feet of bill stuff, 18 and 20 feet long, at $9 and $9.50 a thousand, kind of timber not stated. The Prentiss Lumber Company lately sold to Ohio parties 700,000 feet of Norway at $9, 650,000 feet of common stock white pine, at $7.50, $15 and $35, and 500,000 selected stock, at $25 a thousand.—*Northwestern Lumberman.*

A MAINE WOOD INDUSTRY.

Ranger Brothers, of East Wilton, are carrying on a kind of wood manufacture which is thus described by a local journal. It is the process of stripping lumber for veneering sleigh-backs and dashers, picture-frame backs, etc. The wood used by them is principally basswood, and is prepared for stripping by sawing the logs into the length required. These are stowed into the steaming room, which will contain 2,000 feet of lumber. The logs are steamed about 13 hours, and it is a very particular job, as the lumber must neither be steamed too much nor too little. The logs are now turned out perfectly round and then placed in the cutter, the log being held as in a turning lathe and the knife held down upon the revolving log by means of a long lever purchase. The wooden sheets, as they are cut, pass along upon a table, until the log is used up. Out of a log two feet in diameter they will average about 112 square feet, three-eights of an inch in thickness—a strip 28 feet long and four feet wide. The sheets are cut into squares and dried in the sun. If the weather is favorable, it will take about eight days to dry and prepare the sheets for market. The Ranger Brothers now employ five men, and think of enlarging in the fall. They have not taken an order for two years, and still have on hand more old orders than they can easily fill this year, and yet they will do double the work of any previous year—using some 100,000 feet of lumber. They have orders from Germany and from all parts of America.—*Northwestern Lumberman.*

LAKE HURON LUMBER FREIGHTS.

The Alpena, Mich., *Argus* says in reference to lumber freights from that port: "The freight on lumber from Alpena to Ohio ports is $1.25 per thousand, but there is prospect of an advance to $1.50. At the former rate vessels could not pay expenses. The rate to Chicago, Tonawanda and Buffalo is $1.75 per thousand, and on timber to the two latter places the freight is $2. At these figures vessel men do not get rich. A lumber barge has to give one-third of her freight to the steam barge that does the towing, and the longshoremen at Tonawanda demand 30 cents per thousand feet as remuneration for their services in unloading. This leaves the vessel owner about 87 cents per thousand to pay all his other expenses—such as harbor tow bills, clearances, cost of loading, wages and board of crew, and repairs, and it is no wonder that vessels are often tied up for debt. The prospect is not very glorious for owners of lumber barges."

ANCIENT FOREST LAWS.

The first forestry laws were enacted not at all for the preservation of the timber but only to prevent the destruction of woods in which wild beasts might find shelter—that is, they were, strictly speaking, game laws, rather than forestry. The earliest law of this sort of which we have any record is that promulgated by King Canute, of England, in the year 1016. One of its provisions is as follows: "Let no one cut any of our wood, or underwood, without leave of the chiefs of the forest; which, if any one do, he shall be adjudged guilty of an infringement of the royal chase. But if any one cut down an oak *(ilicem)* or any tree that furnishes food for the beasts of the forest, beside infringement of the royal chase, he shall pay to the king twenty shillings." Not until the reign of Henry VIII did laws looking towards the preservation of timber begin to be enacted. One passed in the thirty-fifth year of his reign begins as follows: "The king, our sovereign, perceiving and right well knowing the great decay of timber and wood universally within the realm of England, and that, unless a speedy remedy in that behalf be provided, there is great and manifest likelihood of scarcity and lack, as well for houses and ships, as for fire-wood, etc."—*Lumber World.*

ALASKA TIMBER.

The rapid destruction of American forests is a subject which is attracting the attention of our economists. Some startling figures upon this subject were submitted to the people in the recent discussion of the tariff bill in Congress. All authorities agree that Alaska could furnish timber for the world. Norway pine, spruce, hemlock and cedar predominate. Possibly the eyes of our great lumber barons will be turned to Alaska when the forests of the north-west and the Rockies shall have disappeared before the rapidly advancing and ruthless axe of the pioneer.

The most valuable wood of the coast is the yellow cedar peculiar to that country. It closely resembles hickory. It is recommended for ship-building, and the forests of Maine and the south will soon be denuded of their ship timber. This wood is also susceptible of a high polish, and is adapted to fine furniture. William H Seward was so much impressed with it that he had book-cases made of it and his library panelled with it. Moths are said to shun it more than they do camphor. These vast tracts of timber lands are not in the market. They are part of the public domain of the United States which has not yet been surveyed. The Public Lands Commission recommended that the government make a survey by competent persons, and considered that the timber resources of Alaska would be likely to prove a source of great wealth.

Alaska has an area of 577,390 square miles, estimated to be 369,529,600 acres. This is all subject to the control of Congress, except certain grants made by the Russian government. The land laws of the United States have not yet extended over Alaska, nor have any of the lands been surveyed. Probably one of the next steps of the speculators will be to urge upon Congress that these lands may be surveyed. Undoubtedly there are great fortunes for those who first obtain a valid title to the vast tracts of timber which are immediately accessible to the ocean. Navigation to San Francisco, or to the western terminus of the Northern Pacific road, is easy. Land costs only one and nineteen-twentieth cents per acre.—*Lumber World.*

New Hampshire Timber Purchase.

The Saginaw *Courier* says concerning a purchase of a tract of timber land in New Hampshire by S. J. Murphy, of Detroit: "The tract embraces 47,000 acres, S. J. Murphy, of Detroit, and C. E. Dole, of Bangor, Me., being the purchasers. The land is estimated to cut 250,000,000 feet, about one-half of which is pine the balance is spruce. The price paid was about twenty-five cents stumpage, and the low figure paid is owing to the rough region in which the timber is located, it having been considered almost inaccessible by the usual methods of lumbering in that section. T. E. Dorr, of this city (East Saginaw), business partner of Mr. Murphy, and an experienced lumberman, recently visited the tract for the purpose of determining the improvements necessary to get the timber out, and the probable expense. The understanding here is the purchasers have made a fairly good investment."—*Northwestern Lumberman.*

Utilizing Sawdust.

Numerous methods have been devised to utilize sawdust, thousands of cords of which are annually consigned to the flames for the purpose of getting rid of it. Compressing machines have been invented to press it into solid substances for use as fuel, and for other purposes, and the inventive genius of the country is still engaged in the attempted solution of the problem, "what shall be done with the sawdust?" A new idea has lately materialized, according to an exchange, which says: Pine sawdust, highly compressed, has been successfully used to make up center frames of carriage wheels. It is said to be so solid that it will bear a pressure equal to 23 tons per square inch. As sawdust has also been used for partition and bricks, its application to the production of complex carvings and mouldings does not seem to be far off. This opens up quite a new market for sawdust, which has hitherto been a comparatively waste product.

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THE LUMBER TARIFF.

The Honorable Sir John A. Macdonald, K. C. M. G., Minister of the Interior, Ottawa, Canada.

HON. SIR,—In the interests of the lumbering industry, I respectfully beg leave to bring to your notice and to that of your colleagues, the anomaly and injustice of the National Policy tariff, in the way in which it is at present constituted; that while all other branches of industrial establishments and interests in Canada have received the thoughtful consideration, and the fostering and quickening influence of the Government, through the tariff, the lumbering industry has never received any material benefit more than that which it received under the tariff of 1878,

Under the present tariff, everything used and consumed in the mills, and in the forest, necessary to the prosecution of this most important Canadian industry have increased in price, thereby causing its products to cost more when ready for delivery, and at the places of shipment, than when under the old tariff.

The following comparative statement will show the exaction of the tariff as bearing on the lumbering interest, for the years of 1878 and 1883, respectively, on articles of prime necessity, and which are imperatively necessary to the efficient prosecution of the industry, viz.—Pevies (canting bars), pick hand-spikes, steel and iron shod sleds, boom and binding chains, haruess, oats, hay and cornmeal, boots, woolleu clothing, duck jumpers and over-alls, flour, pork, beef, beans, dried apples, lard, butter, molasses and tea, steam engines and boilers, machinery, water-wheels, axes, mill saws and files and machinery oil.

Articles.	*Revenue Tariff, 1878.*	*Protective Tariff 1883.*
Steam Engines and Boilers	17½ per cent.	25 per cent.
Machinery and Water-wheels		
Millsaws and Files		
Machinery Oil		5 per cent.
Chains	Free.	$5 00 per ton.
Steel, for shoeing sleds, for Hand-spikes and Pevies	Free.	25 per cent.
Harness and Boots	17½ per cent.	20 per cent.
Hay	10 per cent.	10 c. per yd. and 25% Adv.
Woollen, Clothing	17½ per cent.	2c. per yd. and 15% Adv.
Duck, for jumper and over-alls	17½ per cent.	30 per cent.
Duck jumpers	17½ per cent.	1c. per lb.
Pork and Beef	1c. per lb.	10c per bushel.
Oats	Free.	40c. per bbl.
Cornmeal	Free.	50c. per bbl.
Flour	Free.	15c. per bushel
Beans	Free.	4c. per lb.
Butter	4c. per lb.	2c. per lb.
Lard	1c. per lb.	30 per cent.
Axes	17½ per cent.	

It will be seen on an examination of the foregoing comparativo statement, that the present customs tariff (excepting on tea and molasses) is excessive, and must, therefore, bear more heavily on the lumbering industry than the previous tariff.

It is a contradiction of the meaning and spirit of the National Policy, as the people have been educated in understanding it, to admit woods of foreign countries free of duty into Canada in competition with those of our forests—of which injustice the following paragraphs, copied from the customs tariff now in force, will serve to show:

"Lumber and timber, plank and boards, not shaped or otherwise manufactured, of boxwood, cherry, chestnut and hickory, mahogany, oak, pitch pine, rose-wood and sandal-wood, Spauish cedar, walnut and white-wood.

"Woods not further manufactured than sawn or split, viz.—Africau teak, blackheart, ebony, lignum-vitæ, red cedar and satiu wood."

The admitting of the woods of foreign countries into Canada free of duty, in competition with the produce of our forests—excepting those which cannot be done without in the manufacturing of ships' blocks—is opposed to the general interests of advancing the prosperity of the country, and is decidedly coutradictory to fosteruug aud encouraging the lumber iudustry. We have in our forests an abundance of valuable and most beautiful woods, suitable for the finest of manufactures for which wood is used. We have walnut and white-wood, oak and most beautiful varieties of maple and birch and ash, elm and hickory; this being the fact, all woods should be on the duty list.

The American Government and people are not as generous nor as partial to our lumbering interests as we are to theirs. While we admit their timber into Canada, duty free, and give them the privilege of using our market as well as their own, they exact a heavy tax on the value of our woods on entering their territory.

From a careful perusal of the following paragraphs, which were copied from that portion of the American customs tariff particularly dealing with the importation of foreign woods, it will be observed that the statesmen in the Government of the United States have recognized in an eminent degree the policy of protecting its lumbering interests:

"Timber hewn and sawed, and timber used for spars and in building wharves, 20 per cent. advalorem.

"Timber squared or sided, not specially enumerated or provided for by this Act, one cent. per cubic foot.

"Sawed boards, plank, deals and other lumber of hemlock, whitewood, sycamore and basswood, one dollar per thousand feet, board measure. All other articles of sawn lumber, two dollars per thousand feet, board measure. But when lumber of any sort is planod or finished, in addition to the rate herein provided, thero shall bo levied and paid for each side so planed or finished fifty cents per one thousand feet, board measure.

"And if planed on one side, and tongued and grooved, one dollar per thousand feet, board measure.

"And if planed on two sides, and tongued and grooved, one dollar per 1,000 feet, board measure.

"Staves of wood of all kinds, 10 per cent. advalorem.

"Pickets and palings, 20 per cent. advalorem.

"Laths, 15 cents por one thousand pieces.

"Pino clapboards, two dollars per one thousand.

"Spruce clapboards, ono dollar and fifty cents per one thousand.

"Wood, unmanufactured, not specially provided for in this Act, 20 per cent. advalorem.'

In addition to the many disadvantages existing against the profitable prosecution of the lumbering industry I may mentiou the export duty—on shingle bolts, ono dollar per cord of 128 cubic feet; and on spruce and pine logs, one dollar per thousand feet. If there was a scarcity or an insufficiency of timber in our forests in supplying the wants of our people, this tax then might be considered excusable. No such argument, however, can be successfully advanced in favor of its continuance, as we have an inexhaustiblo supply of timber in the forest, sufficient for the wants of tho couutry for all time to come.

All other iudustries iu Canada, without exception, are protected and fostered, and are in various ways encouraged, and receive full privilege under the tariff, without let or hindrance, to export their products where they please; and why, therefore, the lumbering industry should be singled out to be restricted and hampered in its export, I must confess that I cannot understand.

In support of the statement that all industries (excepting lumbering) in Canada are protected and fostered, and otherwise receive the benign influeuce of the Government, through the tariff, I respectfully beg leave to mention the iron industry. My reasons for singling out this trade to make a comparison is that it more recently received the generosity of the Government than others. Iu addition to the generous manner in which this industry was considered in the past, when framing the new tariff your colleagues were pleased, during the last session of Parliament, in further protecting it, by placing the duty on steel at five dollars per ton, and in making an appropriation of a sum, presumably in the estimates, sufficieut iu giving this highly favored industry a cash bonus of one dollar and fifty ceuts per ton on all the ore that would thereafter be extracted from the soil.

The following statement will show the number of tons of iron ore raised from the pits in the year ending April, 1881, and respectively by Provinces:—

Provinces.	*Tons.*
Ontario	91,877
Quebec	74,242
Nova Scotia	53,878
British Columbia	2,560
New Brunswick	500
Total tons	223,057

The number of tons of ore, as shown in the foregoing statement, was the out put of the iron mines in Canada for one year. The bonus will, no doubt, have the effect of largely stimulating this industry, and it is possible the present year may record the output to be 500,000 tons. If this figure is reached, it will mean that this industry will receive from out of the treasury ($750,000) seven hundred and fifty thousand dollars.

In the Province of Nova Scotia there was raised from the pits 53,878 tons, and of this quantity 38 tons was for Cape Breton County, and the balance, 53,840 tons, was the output of mines in the County of Colchester, which are owned and worked by the Londonderry Iron Works Company and others. This bonus, theu, would mean for the proprietors of these mines the recciving of a sum, annually, of, at the least, eighty thousand dollars. An amount sufficient in paying the interest at four per cent on a capital sum of two million of dollars,—which is a larger sum than that which is at present invested in the iron industry there.

It is not for me to say that this princely generosity of the Governmcnt should not be continued towards encouraging a larger development of the iron industry—not at all—but merely to give an idea to the representatives aud thinking people of Canada of the great difference there is in encouragement given to this and other industries as contrasted with lumbering interests.

From all these circumstances it must be admitted that the lumbering industry suffers under great disadvantages compared with other industries, and never received that measure of consideration and encouragement from the Government to which, from its great importance as a labor-giving industry, it is justly entitled.

To give you an idea of its present proportions, and its great importance as a source of national wealth, I beg to direct your attention to the perusal and close examination of tho subjoined statistical statements which were made up from the report of the census of 1881, and from the trade and other returns of Canada which were available, and must, therefore, be reliable.

The gross value of the produce of the forest for the year ending the 4th April, 1881, was $38,541,752. This amount was credited among the various Provinces as follows:

Ontario	$ 16,601,175
Quebec	10,542,649
New Brunswick	6,532,826
Nova Scotia	3,094,132
Manitoba	885,173
P. E. Island	240,153
Territories	95,318
	$38,541,752

The value of the product of this industry for 1881, if divided among the people, the population now being 4,344,810, would give nearly niue dollars to each iuhabitant.

The following statement will show on examination the number of saw mills, large and small, inclusive, engaged in maunfacturing in the various Provinces in 1881, and, besides, the number of stave and shingle mills in operation, and also the number of hauds employed.

Provinces.	*Lumber Mills.*	*Shingle Mills.*	*Stave Mills.*	*Men.*
Ontario	1761	204	27	18,010
Quebec	1729	377	1	13,312
New Brunswick	478	85	....	7,494
Nova Scotia	1190	114	3	4,435
Manitoba	37	...	....	582
P. E. Island	165	16	....	459
British Columbia	27	5	....	404
Territories	3	...	...	44
Grand total	5390	801	31	44,740

It will be seen in the foregoing statement that 44,740 persons were directly employed in 1881 in the mills manufacturing the produce of the forests into deals, inch and other lumber, shingles, staves, &c. This number does not include the lumbermen in the woods nor the log drivers on the rivers and streams, if they were enumerated and added, it would be found that the number of hands directly employed through the lumbering industry in the mills and in the forest, and on the rivers and streams in that year was not less than 100,000 people. The census returns show that for 1881, there were 812,136 distinct families in the Dominion, and the population numbered 4,324,810 souls, which makes the average number of persons in each household to be five and a fraction. It is therefore reasonable to infer that, taking each family, including the wage-earner, to be composed of five persons (man and wife and three children), the lumbering interest, as one industry, has been equivalent in 1881 to the giving of a livelihood to about 500,000 of our people—being about one-ninth of our whole population.

The amount of capital invested in the industry, including mills, machinery, &c., was estimated at $25,059,680, and credited respectively to the Provinces as in the following:—

Provinces.	*Capital.*
Ontario	$11,397,889
Quebec	7,673,608
New Brunswick	3,058,436
Nova Scotia	1,704,133
Manitoba	609,350
British Columbia	344,350
P. E. Island	217,919
Territories	64,000
Total capital	$25,059,680

In the following statement will be seen the total value of the export of the produce of the forest, manufactured and otherwise, for the year ending 30th June, 1883, and respectively by Provinces:—

Provinces.	*Export.*
Quebec	$ 9,280,233
Ontario	8,015,485
New Brunswick	4,724,422
Nova Scotia	1,587,041
British Columbia	362,871
P. E. Island	20,098
Total export	$23,991,053

When it is considered that the total sum of capital invested in 1881 in all of the industrial establishments in the country was $165,302,622, and of this great sum the lumbering interests shared $25,059,680, and that its produce exported in this last year, 1883, ending 30th June, reached twenty-five per cent. of the sum total of all Canadian produce exported to foreign countries, it must therefore be conceded, without cavil or doubt, that the lumbering industry is, in extent and in value, the greatest and most important of our industries.

The foregoing comparative statements give but a faint idea of the immeuse wealth that can be gleaned from our forests.

The Dominion has in its unexplored forests an iuexhaustible supply of various kinds of wood, and which is in extent and in quantity sufficient, when developed, of giving a livelihood to more than a million of our population; and I have no hesitation in stating that this much to be desired result can be arrived at within the next decade by the Government eucouraging the industry.

The encouraging of the lumbering industry, with a view of facilitating its greater development, is a broad question and worthy of the gravest consideration of the Government. It is a national question of the first importance. It not only affects one Province, but all the Provinces, and if the Dominiou is ever to become rich and powerful, and to rank and be respected as one of the great nations, it must in a large measure be through the opening up of our vast resources, which cau be doue by a judicious encouragemeut beiug given to our industries—to utilize and work up, in mauufacturing and otherwise, the resources of the soil.

This question of fostering aud facilitating a greater developmeut of the lumbering industry is not a new subject; it was the one great plank in the platform of argument made by candidates seeking Parliamentary honors in 1878, and by the press favoring the (so-called) National Policy, that so soon as that policy would be confirmed by the people the first caucus of the Governmeut—its promoters—

would be the consideration of developing our industries.

It is now five years since the inauguration of that policy, and particularly now, that nearly all of the industries of Canada have in various ways received marks of encouragement from the Government, it must be admitted, therefore, that it is about time the promises made to those interested in lumbering in this connection were fulfilled.

There is no class of people in the Dominion of Canada who has greater claims or deserves more encouragement of the Government than the lumbermen. It is a fact that their interests have been ignored and neglected, never receiving but small recognition from any of the Governments in the past nor under the present regime, notwithstanding they pay tribute, as it were, to every home industry, and, besides, paying as much, if not more, revenue into the treasury per capita, than of that received from those prosecuting other industries.

It is a difficult problem to figure out, or to state with any great degree of reliability, as to how much more revenue is paid by one class of our population than another, as there are no statistics at present to be found in the blue-books of the Parliament treating on such a subject. But, if we carefully examine the revenue statistics of Nova Scotia for the year 1866, it being largely a non-producing Province, some information may be gleaned on the question which may serve to arrive at, fairly, a correct conclusion.

The Province of Nova Scotia previous to Confederation, was not an agricultural nor a manufacturing country, to any extent. The occupations of the people consisted principally in mining, fishing, shipbuilding, and in lumbering, and hence their imports were larger than Provinces in which the people earned a livelihood though other avocations. The average of the customs tariff of this province at that time was small, not exceeding ten per cent., still the *per capita* tax of the people on this average reached ($3.76) three dollars and seventy-six cents (*vide* the Auditor-General's Report to Sir John Rose, the then Finance Minister, on the letter of Hon. A. W. McLellan, dated September 17th, 1878, asking, that Nova Scotia receive better terms). The present Dominion tariff, when figured to make a general average, will be found to equal an advalorem duty of twenty-five per cent. Now, if we apply this average of our tariff to the imports of Nova Scotia for 1866, it will be found that they would be paying under such a tariff, a *per capita* tax of at least nine dollars and forty cents; the same rule applies to the lumbering industry as to Nova Scotia.

It may, therefore, be safely estimated that under the National Policy tariff, the lumbering population of Canada, numbering about 500,000 people, pay nearly five millions of dollars in customs and excise towards providing for the expenditures of the country, and in giving protection and bonuses to the various industries, It is therefore unreasonable to expect that the lumbermen will be satisfied any longer in being thus treated, without receiving, in some measure, a countervailing benefit.

In this connection, and with a view of assisting the Government in devising a scheme for the better development of the lumbering industry, I beg respectfully to offer for your consideration some ideas that have presented themselves to my mind. which are as follows:

The repeal of the export dues on Canadian spruce and pine logs, and from off shingle and stave bolts; the removal from the free list to the duty list of all foreign woods, excepting those kinds which are imperatively necessary and cannot be done without in the manufacture of ships' blocks; the exporter or shipper of deals or other lumber, whether of pine or spruce, when being exported to foreign countries (to offset, in some measure, their import duties), to be paid an export bounty or bonus, per standard on deals, and per thousand feet on boards.

The policy of encouragement as foreshadowed in the foregoing suggestions, if acted upon by the Government, would, in my humble opinion, work beneficially, causing a larger development of the industry. It is a question in which the people of the country from Cape Breton on the Atlantic to British Columbia on the Pacific, are largely interested. The Government, however, might think it better to refer the matter to a commission, composed of gentlemen from the several provinces having a knowledge of the subject, who would give their most earnest consideration to the question, and report on a policy which could be acted upon by your colleagues.

It is unnecessary for me to tell you that there are certain duties developing on and expected from the Government under the National Policy, and that the principal one of which is to legislate and so frame the tariff that it will foster and build up uniformly the various industries. The majority of the people declared in favor of that policy on two occasions (1878 and 1882), believing the principles on which it is based to be sound, and best suited to advance the industrial and other interests of the country, and they expect it to be applied and carried in its entirety.

Trusting that this great question of the lumbering industry will receive the earliest and most earnest consideration of yourself and colleagues, and hoping that the result arrived at will be the placing of it in the rank of equality to which, from its great importance as a labor-giving industry, it is entitled, with other Canadian industries.

I have the honor to remain, Sir,
Your obedient servant,
JOHN A. MACKASEY.

Halifax, N. S., July 23, 1883.

TIMBER LOSSES FROM FIRES.

To the Editor of the Monetary Times.

DEAR SIR,—My attention has been called to an article in your paper of the 27th July, entitled "Our Forest Wealth," in which you say "we would hesitate to accept as accurate the statement of Mr. Thistle at a Forestry convention—on which Mr. Phipps bases some caculation that fire destroyed ten times as much timas the axe." As my name has been given as the maker of this somewhat sweeping assertion—unsupported by any data—an explanation as to how the error may have occurred in connecting it with my name, if in the report of the Forestry convention, is necessary. The opinion I expressed then, and of which I was satisfied from extensive explorations when practising as a land surveyor, and since in connection with my lumbering business, was "that the amount of timber so destroyed was far in excess of that manufactured." The same day on which I saw your article, meeting Mr. Peter White, M.P.P., for North Renfrew, an extensive and observant lumberman, who had taken an active part in the discussion mentioned, I asked him if he remembered it, and how such a mistake could have arisen. He informed me that the Hon. Geo. Bryson, also a very experienced lumber merchant, in the course of the debate had expressed it as his opinion that in the valley of the Ottawa, in the country that had come under his observation, the proportion of pine destroyed by fire would be about ten to one manufactured.

The very large fires that have burnt over the country extending from Lake Nipissing and Sturgeon River, to the meridian of the Sault St. Marie, and also from the head waters of the northern tributaries of the Ottawa to the watershed of the Hudsons Bay, which fires took place long prior to the commencement of timber manufacturing, would impress one, when included with more recent fires in our pine, arising from settlers' carelessness in clearing lands, and from hunters and river drivers, that the estimate given by Mr. Bryson from his own observations, may be generally nearer correct than one likes to suppose. It must be borne in mind that a country once burnt over is destroyed from the seedling up—while in manufacturing, as the operator is always seeking for the best article his limit will produce, the thinning out tends to the more active growth of younger timber. And if fire could be avoided the natural seeding and growth would, in my opinion, support a very considerable manufacture.

In this connection I am satisfied that any efforts to draw public attention and educate the people to the importance of protecting the forests will be thoroughly appreciated by the lumbering interests. And so highly do the license holders regard the necessity for caution that very few would take the risk of clearing up new lumber farms, or increasing old ones, if they are at all near their pine forests. I think it is safe to say that bush fires are becoming much less frequent, and that the efforts of the various governments towards establishing some system of forest fire police in connection with the present staff of forest rangers will be productive of further benefit, more especially when aided by the better information of the public in such matters, that must result from their discussion in the press.

I am truly yours,
WM. R. THISTLE.

August 1st, 1883.

Great Sale of Timber Limits.

MONTREAL, Aug., 16.—It is stated that Mr. Senecal has made another grand coup of half a million by selling the timber limits of Hull estate to his new colonization company at the meeting in Quebec yesterday for two millions and a half, leaving him master of a considerable portion of the property, the whole of which cost him about a couple of months ago exactly two millions. The purchase includes the mills, wharves, and houses. It covers an area of 2,700 square miles of land. The timber wharves at Montmorenci extend eight miles, and are reported to be the finest on the continent. An English expert who examined the property estimates the annual production of timber at eighty millions of feet. The stock books of the new company, which were only opened here at the beginning of the present month, contain subscribers, it is reported, for $1,500,000. This looks as if there are lots of capital in the province for investment.—*Mail.*

Cause of Boiler Explosions.

A fruitful source of damage done to boilers, and one which has ruined thousands, is the practice of blowing a bsiler off, and immediately refilling it with cold water, while the brickwork is red hot. The *Age of Steel* believes that nothing will tear a boiler to pieces quicker than this. Boilers bave exploded with disastrous effect from this cause after the fire had been drawn. Probably most persons not familiar with the matter would be surprised to know the pertinacity with which cold water will cling to the lowest point of a boilor under these circumstances. Local contraction of such severity is thus enduced that nothing can withstand its effects, and a few repetitions are generally sufficient to ruin any boiler.

Big Blaze in Chicago.

CHICAGO, Aug. 15.—The United States Rolling Stock Co.'s buildings were burned last night. The fire began in the planing mill. The loss will reach half a million. The stock destroyed included 60 complete cars, valued at $500 each, and a million feet of lumber. The company employed 500 hands.

COTTONWOOD lumber seems to be coming into large use, and for dry goods cases, starch boxes, and similar purposes it is said to be well adapted. One establishment in Ohio, it is said, works into boxes as many as two million feet of lumber annually. For building purposes it is not well adapted, as it apt to swell and shrink with the condition of the atmosphere.

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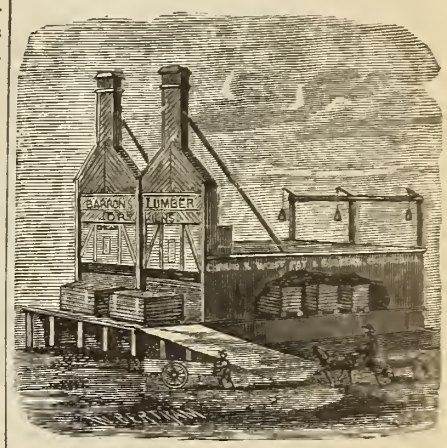

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Burdock
BLOOD
BITTERS

Market Reports.

TORONTO.

From Our Own Correspondent.

AUG. 23.—There is a fair amount of trade being done by all the retail yards here at present. Nothing rushing and still little to complain of. The stocks at nearly all the yards is extremely light, most of the dealers preferring, whenever possible, to fill orders direct from the rail. This method saves long hauls to their yards, and in a majority of cases amounts to a saving of 50 cents per M, which in itself gives a living profit in cases where prompt payment is made. Dealers are enabled to adopt this course at the present time owing to the large quantity of lumber owned by wholesale dealers piled off the cars alongside the rails. On enquiry I find there is some disposition on the part of retailers to cut down on figures previously quoted you, but mainly in cases where direct delivery can be made from the rail, and to good men. Laths have receded in price and may now be quoted at $2 per M in car load lots, and $2.50 per M from the yards. Shingles remain firm at previous quotations, choice lots of clear and picks have been sold during the past week at $35.00 by car load lots. Shipments from our docks move off slowly, something like 3,000,000 feet having left here since my last letter, but it would look more cheerful had 10,000,000 feet passed off in the same time, which could have easily been done had there been the demand for it. Choice lots will sell readily enough, it is the coarse common that accumulates on our hands, and when we take into account the fact that only few stocks will pan out more than 10%, clear and picks, you will be able to form some idea of the large amount of common that accumulates, unless it can be worked off at paying figures, owners of large stocks must come out behind at the close of the season. Allowing only 100,000,000 feet of mill run lumber as likely to find its way to this market for tho season of 1883, we have eighty to ninety millions of coarser grades to got rid of by some means, and with a limited local market, this means a glut. It must be borne in mind that the above is a low computation, and, in placing it thus low, I do so believing that by reason of the present slack demand a larger amount will be held over at the mills during the coming winter than for some years past. In consequence of the late starting up of the mills this was at any rate a foregone conclusion, and the present condition of the market will tend to make the quantity to be wintered over still larger than was anticipated. We have only a little over two months on which to depend for safe navigation and I fear there is no chance to crowd a good season's work into so short a space.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1¼-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	3 00

MONTREAL.

From Our Own Correspondent

AUG. 25.—We have little or no change to note in our lumber market. Prices keep steady and unchanged for seasoned lumber, but there is an easier feeling for new cut stuff, and a decline is said to have taken place in Ottawa for that description, but no concessions will be made as yet for dry. The enquiry for ash and cherry on American account is well maintained, and holders are firm. Shipping demand for deals has been good and a considerable quantity are being shipped. Local demand for building purposes is fairly active. We continue to quote dry lumber ex yard as under.

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	1 60@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

FREIGHTS AND SHIPPING.

Since the date of our last report only two vessels have been loading for South America and no clearances as yet reported. Another vessel was taken up to-day for the River Platte at $15.50. A considerable quantity has been shipped to the United Kingdom at rates averaging from 65s. to 67s. 6d., and there is a still fair demand for room on board outgoing steamers. The shipments since the date of our last report recorded at the custom house are as follows:—To London, SS New York City, 19,286 pcs deals: SS Avlona, 9,055 pcs deals; SS Erl Ling, 4,391 deals and 761 ends; Brig Mathilda, 7,829 deals and 129 ends. To Liverpool, SS Lake Huron, 5,225 pcs deals, SS Anjer Head, 297⅞ std. deals and 45 std. boards; SS Ontario 10,875 pcs boards and 6,932 pcs deals; SS Circassian 4,068 pcs deals; SS Hanoverian, 6,037 deals; SS Lake Nipigon 2,519 pcs deals; SS Oregon, 2,886 pcs deals and 21,779 deal ends; SS Lake Winnipeg, 6,073 boards; SS Texas, 9,760 boards and 4,778 ends. To Glasgow, brig Limpio, 4,164 pcs deals; SS Lucerne, 189 pcs boards. To Gloucester, Bk. Spencer, 8,053 pcs deals and 300 ends; Bk Hero, 8,630 white pine deals and 880 deal ends. To Bristol, SS Dorsot, 5,738 pcs deals.

CORDWOOD.

There have been fair arrivals and the stock on the wharf is ample for all requirements as the demand at present is not very active. Maple is a little dearer, and we advance quotations half a dollar. We quote on the wharf ex cartage as follows:—

SHIPPING.

Long Maple	$ 7 50
Short "	6 50
Long Birch	7 00
Long Beech	6 00
Short "	5 00
Long Tamarack	6 00

LIVERPOOL MARKETS.

Late advices by mail note an improved consumption and spruce deals have advanced about 5s. per standard. 1st quality Quebec pine deals are quoted £21 to £22; St. John, N. B., spruce, £7 5s. to £7 7s. 6d.; Lower Port spruce, £7 to £7 5s.

OSWEGO, N. Y.

From Our Own Correspondent.

No change in quotations. Since our last the arrivals have been very light; receipts up to date for 1883 have been 99,000,000, for 1882 123,000,000, showing a falling off of 24,000,000 feet.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

WINNIPEG.

The Winnipeg *Commercial* of Aug. 21, says: On account of several large building contracts being let in the city, lumber trade has been brisker during the week than for some time past. Quotations, however, remain as they were. The price is not a fixed one, and a cash customer can generally get a big discount from the rates given. Quotations are:—Pine lumber, 1st, common boards dressed, $26.50; 2nd do. dressed, $25.50; 1st do. rough, $26.50; 2nd do. $25.50; sheathing, rough, $25; timber 16 feet and under, $24; do. over 16 feet, for each additional 2 feet, $1; dimension and joists 16 feet and under, $24; do. over 16 feet for each, $1; fencing, $25; 2 and 3 inch battens, $30; A stock boards, all widths, $50; B do $45; C do. $40; D. do. $35; 1st clear, 1, 1¼, 1½, and 2 inch, $60; 2nd do. $56; window and door casings, $50; base boards, dressed, $50; 1st pine flooring, siding and ceiling, $40; 2nd do. $35; 3rd do. $32; ½ inch split siding, dressed, $30. Spruce lumber—timber 16 feet and under, $23; do., over 16 feet for each additional 2 feet, $1; dimensions and joists, 16 feet and under, $23; do., over 16 feet for each additional 2 feet, $1; boards, $23; 1st flooring, siding and ceiling, $32; XX shingles, $5.50; Star A shingles, $5.50; X shingles, $5.50; A do. $5; lath $4.50.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ℔ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of August 17, says:—There is a quiet demand, but trade is about as good as is usual at this midsummer stage. Stocks in the yards are quite moderate, but there is a disposition to proceed in a very cautious and limited manner. Eastern lumber has arrived quite liberally, with hemlock steady, pine boards in fair request, spruce lower, and laths scarce, firm and in good demand. Western pine is rather dull, with light arrivals, but ample stocks to supply the present limited demand. Southern pine is quiet, with few orders on the market for timber. Flooring and steps are steady with a moderate supply.

Hard woods are moving fairly. Walnut of good grades is in fair demand. Cherry of choice descriptions is in good request. Whitewood is dull, with an overstock, especially of second quality and culls. Ash and oak are quiet and in moderate demand at about previous prices.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of Aug. 25, says:—The past week has been one of the dullest of the season. Arrivals have been meagre compared with the two previous weeks and at that cargoes have stuck to the market with surprising pertinacity considering the fewness of the offerings. The total of arrivals at this port for the week ended on Wednesday were 187 as compared to 240 for the week before. Of all coming, a regular proportion go to the yard docks without stopping at the market, whether the total of arrivals is great or small; so in case there is a meagre total there is a smaller than usual proportion of offerings on the market. This has been the condition for the past week. The wind has blown a gale from the west and southwest a large part of the time, thus preventing the fleet from reaching port, and it is probable that this adverse condition will be succeeded by one directly opposite, and that by the time this report is in print the river will be blockaded by loaded vessels. In fact, at this writing the wind has veered to the northwest, and frequenters of the market are looking for a big squadron of luggers.

It might have been supposed that since the arrivals were few the inquiry would have been urgent and prices a little better than when the market was crowded. But such has not been the case. The market has been sluggish all the week, and trading has been done at the recent decline in values. The wholesale dealers continue to go slow about purchasing.

Receipts of lumber, shingles, etc., for the week ending Aug. 23, as reported by the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	Shingles.
1883	55,207,000	33,613,000
1882	62,226,000	17,975,000

FROM JANUARY 1, 1883, TO AUGUST 23, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	1,011,854,000	684,487,000
1882	1,204,111,000	512,428,000
Increase		172,059,000
Decrease	192,257,000	

STOCK ON HAND AUG. 1.

	1883.	1882.	1881.
Lumber	510,799,847	511,903,574	422,404,156
Shingles	323,957,215	244,211,650	184,165,000
Lath	61,109,958	39,859,837	36,346,046
Pickets	1,802,911	1,717,165	2,777,053
Cedar posts	499,070	293,253	255,655

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

ABERDEEN.

The *Timber Trades Journal* of August 11, says:—Imports here and along the coast have been comparatively light during the past month, while the spurt in the building trade is quieter.

At Messrs. Milne & Co.'s sale last week of waney pine deals and hardwoods there was a good attendance of buyers, and prices on the whole were pretty good. These sales, however, of American goods are felt to be a necessity in the north, and are generally well patronized, and value given for the goods exposed; with manufactured stuff this cannot be said. Waney pine fetched from 2s. 3d. to 3s., according to girth; deals, 3s. 2d. to 3s. 6d.; elm, 2s. to 2s. 4d.; birch, 2s. to 2s. 2d.; hickory also sold well.

CARDIFF.

The *Timber Trades Journal* of August 11, says:—This week has been a very dull one here; only one steamer cargo of about 400 standards has come to hand from the Baltic, and a sailer from Wyborg, and one from Miramichi.

Respecting engagements of tonnage the market has been exceedingly inanimate. Canadian goods, we hear, are pretty stiff, and a rising tendency is apparent both in prices and rates of freight. Buyers, as a rule are not pushing matters, but it is reported that some c.i.f. transactions have been effected by Liverpool and London merchants. There is no doubt that Canadian goods are considerably firmer than they were some weeks ago, which is more than can be said about Baltic material.

Mining timber and props remain in much the same condition. We have seen a slight rise in French props, but Norwegian mining timber has not advanced equivalently, although buyers ought to pay more than is the case at present.

GLASGOW.

The *Timber Trades Journal* of Aug. 11 says:—The imports of wood to the Clyde for the past week include five cargoes of Quebec timber and deals at Greenock, the tonnage of the vessels employed in conveyance aggregating 9,900; and at Glasgow the imports of Quebec deals have been about 1,800 loads. Imports at Grange-

mouth are represented by a carrying tonnage of 2,041 tons.

In the meantime the market is fairly furnished with all the ordinary useful descriptions of wood ; but as yet it is quite safe to say there is no appearance of a glut in the market. The Quebec arrivals have been comparatively moderate. Of lower port birch there has been rather a sparing supply at Glasgow this year, the yards at present being quite bare. There is an opening also for Tabasco mahogany, with prospect of fair prices being realized.

Imports of pitch pine have been considerable, but not up to last year's total at date ; tonnage employed, say 1882, 33,000 ; 1883, 28,000 tons.

The amount of work on hand specially in shipbuilding is very large. Although housebuilding is still quiet with us, 1st quality Canadian deals of good dimensions would be a safe import, as the stock on hand is moderate, and the demand by machine makers and millwrights considerable, besides what is required by builders and for general joiner work.

LEITH.

The *Timber Trades Journal* of August 11, says :—The import list for the past week only contains four cargoes deals and battens two of which are from Archangel) and consignments of wainscot and walnut. Other four of the Quebec fleet came into the Roads on Tuesday, but their cargoes are not passed at the Custom House at the time of writing.

On Tuesday last Messrs. Ferguson, Davidson & Co. offered for public competition their cargo of American goods ex Garibaldi. For the waney pine not a single bid was forthcoming, notwithstanding its undoubtedly superior quality. This, taken in conjunction with the very few lots sold by Messrs. Wm. Thomson & Co., at their sale on the previous Tuesday, does not seem to give a very bright outlook in face of the unusually heavy shipments from Quebec to this port. Only 14d. was offered for the 3rd yellow pine deals, a price which the auctioneer did not deem fit to accept, although fully 1d. per foot above the same stuff bought on the previous Tuesday. A good portion of the deals, which are of very fine quality, were sold privately at the close of the sale at a substantial advance on the price offered at the sale.

On Tuesday first Messrs. Mitchell, Somerville & Co. will offer an assortment of prime deals and battens for public competition, while the following week Messrs. A. Garland & Roger will expose their Quebec cargo.

LONDON.

The *Timber Trades Journal* of Aug. 11, says : Among the 66 timber and partly timber-laden ships reported in London between the 2nd and the 8th instant inclusive, 14 were from our North American colonies, a rather large importation thence in a single week ; hut there were 21 from Russia and Russian Finland. There were 31 steamships in the list, several with small parcels of staves, &c., and upon the whole the supply was varied and ample for the state of the demand. The abundance of steam vessels at present seeking employment is thought likely to keep freights for the chief timber depots from rising this year so early as they did last summer, but small handy sailing vessels, from 100 to 140 standards, are likely to be in demand for the outports,and will probably obtain some advance on the first open-water rates ere the present month expires.

LIVERPOOL.

The following appears in the *Timber Trades Journal* of August 11 :—Since the auction sales held during the latter part of last week there has been little of moment to remark upon, as the import has still continued light, and the consumption has naturally been interfered with by the intervention of the holidays. We may, however, look forward for several arrivals, as a strong southwest breeze has sprung up, which will bring up many vessels now due, not only from Quebec but from other ports in the Dominion. Freights in St. John, N. B., fluctuate but little, and with a continuance of the low prices obtained for spruce deals on this side there is no disposition to charter ; in fact, it is reported that several mills have shut down rather than continue cutting at the prices now going at the ports in the United Kingdom.

On Thursday, the 2nd instant, Messrs. A. F. & D. Mackay held one of their periodcal auction sales of deals and whitewood. The catalogue was, however, somewhat more limited and unattractive than usual and owing to these causes, and probably to the influence of the holidays, neither the attendance of buyers, nor the competition for the goods submitted for sale, was equal to what was expected. About 3,500 pieces of the St. John, N. B., cargo were withdrawn, as the prices hid were not up to the brokers' limits ; the other goods sold realized the following prices :—

St. John, N. B., spruce deals—

		£ s. d.		£ s. d.
16 to 24 ft	3×11	7 15 0	to	7 17 6
12 " 15 "	3×11	7 10 0	"	7 12 6
9 " 11 "	3×11	7 5 0		
16 " 26 "	3×9	7 5 0	"	7 7 6
12 " 15 "	3×9	7 2 6		
9 " 11 "	3×9	7 5 0		
16 " 25 "	3×7	6 17 6	"	7 0 0
12 " 15 "	3×7	7 0 0		
9 " 11 "	3×7	6 15 0		
9 " 20 "	3×15	7 5 0		
9 " 21 "	3×14	7 2 6		
9 " 23 "	3×13	7 5 0		
9 " 25 "	3×12	7 5 0		
9 " 25 "	3×10	7 2 6		
16 " 23 "	3×8	7 0 0		
12 " 15 "	3×8	6 17 0	"	7 0 0
Deal ends—		5 15 0		

Shediac spruce deals—

16 to 19 ft	3×11	7 7 6		
12 " 15 "	3×11	7 7 6		
16 " 25 "	3×9	7 7 6		
12 " 15 "	3×9	7 0 0		
9 " 11 "	3×9	7 2 6		
16 " 27 "	3×7	6 15 0		
12 " 15 "	3×7	6 15 0		
9 " 11 "	3×7	6 12 6		
9 " 27 "	2½×7	6 12 6		
9 " 19 "	3×13	7 5 0		
9 " 20 "	3×12	7 5 0		
9 " 25 "	3×10	7 2 6		
9 " 27 "	3×8	6 15 0		
9 " 26 "	3×6	6 15 0		
9 " 27 "	2½×6	6 12 6		
Deal ends—		6 10 0		

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of July, and for the first seven months of the year :—

MONTH ENDED 31ST JULY., 1883.

Timber (Hewn).	*Quantity. Loads.*	*Value. £.*
Russia	63,048	116,557
Sweden and Norway	54,868	94,935
Germany	35,886	100,763
United States	18,788	69,709
British India	1,738	25,766
British North America	49,192	230,152
Other Countries	24,341	33,334
Total	247,816	671,216
Timber (Sawn or Split, Planed or Dressed).		
Russia	219,719	499,756
Sweden and Norway	305,666	679,215
British North America	201,572	505,980
Other Countries	38,546	118,399
Total	765,503	1,803,350
Staves, (all sizes)	16,454	71,263
Mahogany (tons)	5,178	54,966
Total of Hewn and Sawn	1,013,364	2,474,566

SEVEN MONTHS ENDED 31ST JULY, 1883.

Timber (Hewn).		
Russia	124,241	247,083
Sweden and Norway	323,770	514,978
Germany	171,775	474,207
United States	74,548	282,845
British India	32,837	459,807
British North America	59,644	270,644
Other Countries	229,912	311,239
Total	1,021,727	2,560,803
Timber (Sawn or Split, Planed or Dressed).		
Russia	338,500	766,491
Sweden and Norway	813,691	1,866,263
British North America	362,711	891,317
Other Countries	203,671	666,235
Total	1,718,573	4,190,306
Staves (all sizes)	63,967	274,121
Mahogany (tons)	26,496	272,233
Total of Hewn and Sawn	2,740,300	6,751,109

THE COMING TIMBER.

There seems to be no denial of the statement that hemlock will succeed pine lumber in the early future, and the Muskegon mill men should keep their eyes on the hemlock timbers on the Muskegon rivers and tributaries. Throughout most portions of the North-west hemlock is abundant. It can be bought for a song almost. The price of hemlock at ten cents a thousand is nothing, when compared with pine that will produce nothing but coarse lumber at $3 per thousand, and plenty of it has been sold at that. There are a very few manufacturers in Michigan who mix their hemlock with their pine dimension, and get the same price for it. Others make $1 per 1,000 difference. Hemlock dimension is certainly as good as Norway, and the latter sells on the cargo market here at not more than 50 cents less than white pine, and often not so much difference as that is made. Hemlock, at present prices, is a good investment, much better than pine, the way they have been booming the latter in certain sections.—*Muskegon News.*

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Blck Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

CENSUS FIGURES.

The following comparison of forest products in Ontario, Quebec, Nova Scotia and New Brunswick, is taken from the Dominion census return :—

	1881.	*1871.*
	Cubic Feet.	
Square white pine	17,358,245	55,236,921
Square red pine	2,571,328	1,954,372
Square oak	5,734,042	3,302,643
Tamarac	4,585,563	5,695,963
Birch and maple	4,294,916	1,939,357
Elm	3,092,224	1,832,654
Walnut	808,350	220,570
Hickory	336,426	197,827
All other timber	47,045,450	20,290,264
Total	88,876,457	69,670,471

Of logs the output was, in the two years —:

	1881.	1871.
Pine logs	21,501,128	12,416,408
Other logs	23,055,706	9,314,557
Masts, spars, &c.	191,078	121,685
Tanbark, cords	398,239	162,521
Firewood, cords	10,493,155	8,713,083

Increased Speed Between New York and Liverpool.

After many sleepy years of slow boat employment the Cunard Company now begins to show hopeful signs of wakefulness to enterprise and appreciation of the public wants. During the past year it has put into service two new and splended steamers, the Servia and Aurania, which are almost equal in speed to some of the fast boats long used on rival lines. The company has now made a contract with Messrs. John Elder & Company, of Glasglow, for the building of two additional steamers of a character and power far in excess of anything that hitherto been devised for the Atlantic mail and passeger service.

They are to be vessels of 8,000 tons burden, and are to have engines of 13,000 horse power indicated, their dimensions being 500 feet long by 75 feet in breadth of heam, by 40 feet in depth of hold ; and what is perhaps the most striking fact of all is, that they are to be guaranteed to steam at the rate of nineteen knot per hour, thus crossing the Atlantic, between Liverpool and New York, in less than six days. These two ships are to cost three millions of dollars.—*Scientific American.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Aug. 10 :—

	1881.	1882.	1883.
Waney White Pine..	1,170,627	1,051,620	1,521,408
White Pine.....	3,765,810	3,756,565	2,028,558
Red Pine.....	711,465	661,561	162,302
Oak.....	1,739,040	730,657	1,151,280
Elm.....	856,081	489,540	246,255
Ash.....	289,893	186,173	178,705
Basswood.....	3,356	393	1,826
Butternut.....	1,087	2,004	989
Tamarac.....	9,163	2,661	4,592
Birch & Maple.....	127,716	272,417	137,060
Masts.....	—pcs	33 pcs	—pcs
Spars.....	— pcs	33 pcs	— pcs
Std. Staves.....	186.3 0.14	237.3 2.15	429.7.2 9
W. I. Staves.....	301.6.0.25	604.1.0.0	372.0.3.9
Brl. Staves.....	.....	10.6.3 4	87.1.1.27

JAMES PATTON,
Supervisor of Cullers.

Quebec, Aug. 10.

LAKE WINNIPEGUSIS.

Mr. McLean, of Toronto, a capitalist widely known in financial circles, has heen prospecting among the timber limits at the northwest end of Lake Winnipegosis during the past month. He helieves that the timber on the slopes of the Porcupine hills is unequalled in any other part of the Northwest, and is not surpassed on the whole continent. There is an abundance of trees measuring from 4 to 8 feet in circumference, and some of them measure 18 or 20 feet. The scenery in some parts is spoken very highly of by Mr. McLean. He was particularly charmed with the portion of the Red Deer river between Red Deer Lake and Lake Winnipegosis. The river is about two hundred yards wide and studded with small islands, which Mr. McLean describes as perfectly fairy-like. Salt springs are to be found here and there, marked by the peculiar greenness and luxuriance of the surrounding vegetation. At the mouth of the Red Deer river there are some springs from which Mr. McLean manufactured a quantity of excellent salt. He mentioned the vicinity of Deep Rock river and Salt river as other places where he had found salt springs. Ducks, geese, and gulls, as well as pelicans, abound on Lake Winnipegosis at its northwest end. What particularly struck Mr. McLean was the immense size of the pelicans. Some of them, he says, measured nine feet hetween the extremities of the wings, while others would not have been less than nineteen feet.—*Winnipeg Sun.*

Manufacturing Spools.

The spool factory at Piccadilly, eight miles from Sussex, N. B., employs fifty hands. Twelve cords of wood per day are used, and spools of all sizes are made. The factory is turning out now about 10 000 gross per month, but it is equal to 17,000 gross per month, if necessary. Clark & Co., of Paisley, and other English thread manufacturers, are supplied.

DESTRUCTION OF THE B. C. CO'S MILL AT MIDLAND.

On Friday evening the 10th inst, the inhabitants of this prosperous village were thrown into a state of intense excitement when it became known that the new mill was on fire. About half-past six many persons in different parts of the village noticed a small blaze as if some rubbish was on fire in the mill yard. In a few miuutes, however, it proved to be the engine house on fire. From there it spread rapidly to the fine mill, which soon disappeared. Few expected when the mill was burning to see the lumber go also, but by ten o'clock the last pile of 6,500,000 feet was enveloped in the flames. Several attempts were made to make a break in the immense rows of lumber, but the fire raged so fiercely that the workers were driven back each time without accomplishing much. When the fire burned fiercest the illumination was so great that many at a distance supposed the whole village was on fire, and a great number hitched up their teams and drove into the village. The reflection of the fire was seen over thirty miles away. Had there been a north-west wind at the time the greatest portion of Midland would have disappeared as rapidly as did the immense piles of lumber. The mill property, after the fire, was visited by hundreds who felt keenly the loss of so great an enterprise. The scene of the fire is a desolate spot, the fire having swept over four acres and in its course consumed seven dwellings with the mill and lumber.

At present it is not known that the mill will be rebuilt, as the board of directors in the Old Country will have to be consulted. In the meantime, however, the men who were employed in the new mill will not be long out of employment, for as soon as the electric lights can be got ready the old mill will be kept running day and night. This will take place about Monday next, and then the whole of tho men will be employed. It is hardly possiblo to estimate what the loss will be to the village.

The loss on the mill, trams, &c., is estimated at $60,000, and the lumber in the yard at the time of the fire was valued at another $60,000. On the mill there is an insurance of something like $30,000, and on the lumber about $45,000. We understand that the dry lumber in the yard belonged to Messrs J. & F. N. Tennant, of Toronto, but we have not been able to ascertain the exact amount of their loss.

The fire it is supposed was caused by a spark from the boiler house.

THE GAME LAW.

The game laws have been so mixed and muddled by the Legislature that but few laymen can understand them. The following complitation of their provisions, however, may be relied upon, as it has been prepared by a lawyer of eminence, who is a keen sportsman as well:

The only season during which the following game may be hunted, taken, or killed, is as follows:

Deer—1st October to 15th December, inclusive.

Partridges—1st September to 1st January.

Quail—1st October to 1st January.

Woodcock—1st August to 1st January.

Snipe—14th August to 1st January.

Grey, black and wood ducks—15th August to 1st January.

Other ducks and geese—15th August to 1st May.

Hare—1st September to 1st March.

These may be exposed for sale for twenty days after expiration of time for killing. No eggs taken or destroyed at any time. No traps, nets, or snares, baited lines, or similar contrivances to be used. These may be destroyed by any person without liability. No contrivances described or known as batteries, swivel guns, sunken punts, or night lines to be used for killing wild fowl.

Fur-bearing animals may be only taken, hunted or killed as follows:

Beaver, muskrat, sable, marten, otter or fisher—1st November to 1st May. Nor shall any snare or other contrivance be set outside this season. Nor shall any muskrat house be cut, broken, or destroyed at any time. Any person may destroy such traps, suares, etc., so set, without any liability.

N. B.—No poison to be used in killing the animals named, and no poisoned bait to be exposed in any locality where dogs or cattle may have access to the same.

No deer dog to run at large from the 1st November until the 1st Octoter.

FINES AND PENALTIES.

Deer—$10 to $50 each offence.

Fur animals—$5 to $25.

Birds or eggs—$5 to $25 each bird or egg.

Any other breach of this Act—$5 to $25.

No fine can be less than the minimum fines above. The whole fine goes to the informer.

Insectivorous Birds Act, R. S. Ontario, page 2,009, and amendment 1878, page 82:

These acts do not apply to birds mentioned in the game act, or to birds commonly known as poultry.

It shall not be lawful to shoot, destroy, wound or injure, or attempt to do so, any bird whatsoever, except eagles, falcons, hawks, owls, wild pigeons, kingfishers, jays, crows, ravens, plovers, and blackbirds, but rails may be shot between 1st Septembee and 1st January. Nor shall the birds protected by these acts be taken, captured, bought or sold, or exposed for sale, or had in possession, nor shall any trap or snare be set for them, nor shall it be lawful to take, injure, destroy, or have in possession, any nest, young, or egg of the same. Any person may seize on view any such bird unlawfully possessed, and take the same before a magistrate.

For violation of any provision of these acts a fine of $1 to $20 is imposed, the whole going to the informer, and on nonpayment, imprisonment of from 2 to 20 days.

These acts do not apply to anyone having a written permission from the Commissioner of Agriculture authorizing him to obtain such birds or eggs for *bona fide scientific purposes* only.

1881. Page 284. Act to amend, etc.

Any person may, during the fruit season, for the purpose of protecting his fruit from the attacks of such birds, shoot or destroy on his own premies the birds known as the robin and cherry bird without being liable to any penalty under the act.—*Belleville Intelligencer.*

Noah's Ark Discovered.

A Constantinople correspondent announces the discovery of Noah's Ark. Turkish commissioners appointed to investigate the avalanches on Mount Ararat, suddenly came upon a gigantic structure. The Ark was in a good state of preservation. An Englishman saw that it was made of gopher wood which only grows on the Euphrates. The interior was divided into partitions. Into three of these only could they get, the others being full of ice, and how far the Ark extended they could not say. Says the *Pall Mall Gazette*, an American was soon on the spot, and negotiations have been entered into with the local Pasha for its transfer to the United States.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relievo the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

Convincing Proof.

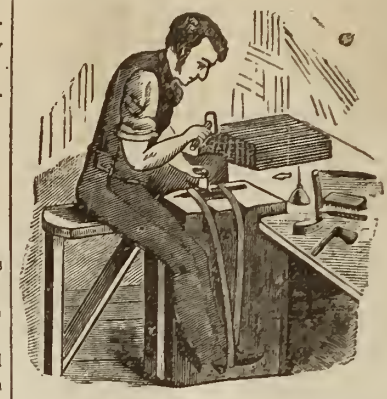
Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. DICKISON,
218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

"LEAVES have their time to fall," says the poet, but Wild Strawberry leaves are on the rise just now, being utilized in such enormous quantities in making Dr. Fowler's Extract of Wild Strawberry—the infallible remedy for Cholera Morbus, Diarrhœa and other Summer Complaints.



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FILES FOR SALE. FILES RE-CUT.

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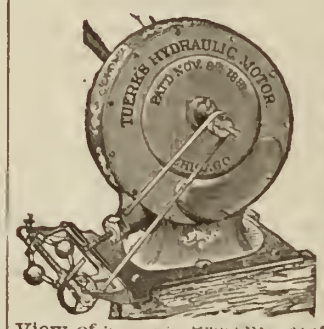
SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

TUERK'S

WATER MOTOR.

Patented November 8th, 1881.



View of Tuerk's Pressure Motor, with Tuerk's Improved Governor Attachment.

For running Sewing Machines for families or for manufactories; also, for running Dental Lathes and Engines, Telephone Generators, Coffee Mills and Roasters, House and Church Organs; also for running one Printing Press or six, at the same time. Paper Cutters, Sausage Machines of any make or size; GRAIN, FREIGHT OR PASSENGER ELEVATORS, Straw Cutters, and all kinds of Machinery by Water Power.

HYDRANT PRESSURE.

Cheaper, Quicker and Safer than Steam.

Over Fifty Motors of other makes have been taken out and replaced with the TUERK MOTOR; among the list are the Backus, the Sabin, the Little Giant, the Hayward, Clark's Piston Engine, and others.

Names of a few who have taken out Backus Motors and put in the Tuerk Motor in their place:

C. W. Meikel, Indianapolis, Ind.
Columbus Telephone Co., Columbus, Ohio.
James Egan, Chicago, Ill.
H. C. Hawkins, Cleveland, Ohio.
Printing Office, Hannibal, Mo.
A. Solmens, Hat Manufactory, So. Norwalk, Ct.
Lake Shore & Mich. So. R.R. Shops, Elyria, O.
Index Printing Office, Evanston, Ill.
Republican, Johnstown, N. Y.
Tribune, Salt Lake, Utah.
Alton Printing Co., Alton, Ill.
A. F. Worthington & Co., Cincinnati, Ohio.
Lemon & Co., Waverly, N. Y.
Braun & Jones, Cedar Rapids, Iowa.
Gates, Douglas & Co., Cedar Rapids, Iowa.
Village of Rutland, Rutland, Vt.
W. L. Randall, Chicago, Ill.
A. J. Stoll, Sandusky, Ohio.
Killits & Wayland, Chillicothe, Ohio.
S. A. Morrow, Springfield, Ohio.
R. Putnam, Chillicothe, Ohio.
N. Shelton, Omaha, Neb.
H. J. Lewelling, St. Helena, Cal., and others.

Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

Send for Catalogue, and state what you want to run,—give full particulars and Water Pressure per square inch.

TUERK BROS. & JOHNSTON,

86 and 88 Market Street, Chicago, Ill.

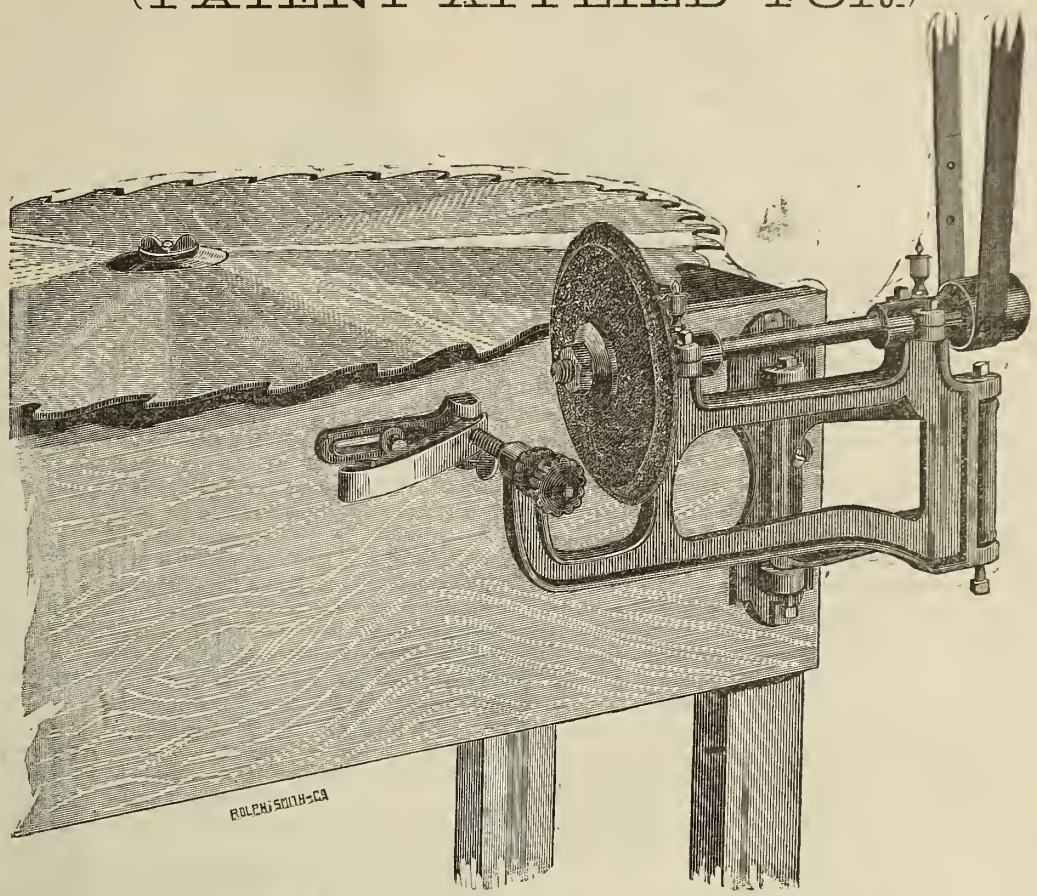
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

Complete!

POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!

JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞ Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

AXE AND AXEMEN.

The axe is the emblem of pioneership, and the precursor of settlement and development. It builds the cabin and levels the forest, making way for the plow, the farm and the city. Its antiquity is untraceable. It was known to our primal ancestors of the stone and bronze ages in the form which comes unchanged to us. Though the progress of mechanics and metal working has brought many advantages in the process of making, it is yet the axe that our great grandfathers hammered out at the anvil, with only the hammer marks ground out and a polish added. Contrary to the general supposition, the axe is an instrument of skill, and the expert axeman looks as closely to the fitness of the bevel of his blade, the form of his helve, the length and shape of blade and pole and the weight of his axe for the purpose contemplated, as the fencer to his foil. The weight of the axe is arbitrary and dependent upon the choice of the axeman for the purpose intended. If the object to be cut is small timber which may be severed at from one to half a dozen blows, an axe with a long, thin blade and as little bevel as is compatible with strength is chosen, and at every stroke the blade is buried to the helve. If the purpose be to fell large trees or cut heavy timbers, and this same axe is used, it bites deeply in its strokes, but the chip remains in the timber after the incisions and many more blows are required to dislodge it than were necessary to its formation ; therefore, for this purpose an axe having a thick, heavy bevel and cutting much less deeply is selected. The bevel, now acting as a wedge, forces out the chip at the same stroke by which the incision is made.

Many manufacturers ignoring the full value of this principle, have attempted to make an axe for general purposes with an average bevel. This, as well as the introduction of double-bitted axes, is a doubtful improvement. Experience teaches that the poll is not only useful in itself, but the essential in giving the proper force and direction to the blade.

The most important essential to a good axe is the helve, which, by its proper form and flexibility, not only seconds skill, but adds materially to the ease and endurance of the workman. In general, machine-made handles do not possess the qualities requisite to good helves.

The axe, like its cousin german, the sword, has fallen from its high estate, and no more is borne as the emblem of power and unity, dangles, formidable, at the saddle-bow of chivalry, or rushlessly crushes through crested helm and cap of steel. The saw, too, has robbed the broad axe of its glory, and the hewers are fast becoming things of old. But even yet a reverence is paid their skill, and when some great timbers which must be true in every line and straight in form and grain are wanted, some one of these, now always an old man, is hunted up, and his skill, his truth of eye and hand, and the long, thin shavings that fall from the broad edge of his axe as from a plane, are themes of wonder to the younger generations of artisans.

Observation develops the fact that large men are as a rule are inferior to small ones as axemen, and it is no unusual thing to find the address of the latter accomplishing feats which baffle the more powerful efforts of the former. A true eye and the ability to strike each alternate blow in precisely the same place are the highest qualifications, and, with a moderate amount of strength and great endurance, make in the end the chopper's skill—an acquirement which happily bids fair to possess an active market value in our country for generations to come.—*C. G. T. in Industrial world.*

A SAW LOG'S STORY.

A correspondent of a New York paper has evidently been going the rounds of a Saginaw saw mill. He thus describes what he saw :—Up the Saginaw in a wide region reached either by the river or its tributaries, the great pine saw log, often three feet in diameter, has its birth. Pine forests, now rapidly thinning out, once covered several thousand square miles around the head-waters. Entering that lumber region in the late autumn, the lumbermen establish camps, 'round which during the whole winter long the axes resound, the tall trunks fall, and in sections are rolled to the adjacent streams for the spring floods to bear away. Floating down the main river, the "boom men" pick out each owner's logs, as identified by the brand, and gather them inside the booms, which may be curtly described as long tree-trunks chained together at the ends, often enclosing a smooth water surface of several acres. The coves of the Saginaw—called locally "bayons," a term borrowed from the lower Mississippi—are especially adapted for the gathering and organization of these log armies. The military metaphor, indeed, has peculiar fitness here, for the logs are mustered, side by side in companies, held together by a rope fastened to each log by a devise not unlike the domestic clothespin. As these logs down the stream are worked up by the tireless mills, these upper booms are dawn upon for more, until the freezing river finds them quite empty, and another winter comes on to yield its fresh supply.

But the saw log's story becomes most dramatic as it nears the mill and, loosed from the restraining rope, is steered into the glade of open water that leads up to the wooden slide. Enter now the great lumber mill, and we shall be in at the saw log's death. Down the slide on a wooden railroad runs a heavy truck, fitted with two cross lines of heavy iron teeth. With a plunge it dashes below the water, still holding its place on the rails. Then three giant logs are floated above it. At a signal the steam is let on, the machinery reversed, the strong chain holding the truck tightens, and the truck itself begins to ascend. The sharp teeth catch the logs, which in a trice, are lifted dripping from the water, whisked up like twigs 100 feet to the mill, and rolled off opposite the first set of saws. These saws are two in number ; one set below is of the buzz variety, perhaps six feet in diameter, and cutting, therefore, through a three-foot log ; but as this semi diameter is often insufficient for a big log, a second and a smaller "buzz," placed above and in front of the first, cuts the slice which otherwise might still hold fast the slab. One of the largest logs weighs a number of tons, and human strength alone would never suffice to turn it after one of its sides has been "slabbed."

Just here comes in a beautiful piece of powerful mechanism. At the touch of a lever a stout beam, armed with iron teeth, rises by the forest Titan's side. It snatches the wood, and in less time than words can tell it the log is tumbled over, and the framework rushing back and forth with amazing speed, has driven the edges of the tree athwart the saws, until the once rough stick stands forth a symmetrical square. Then, in another instant it is shifted before the "gang," a set of ordinary upright saws placed an inch apart, and often with 30 or even 35 blades. Below an ordinary circular planer revolves in front of the gang and smoothes the lower edges of the boards. The immense piece of timber is run through in a few moments, and what was five minutes before a rough tree trunk is transformed into the inch boards of commerce. Nor does the work end here ; for the slabs are passed to a new machine which grasps them with almost human intelligence, and whatever part of them can be made so become laths. Other machines take the harder woods, ash, elm, or oak, and convert them with equal speed into staves, barrel heads and shingles ; and finally the otherwise useless debris passes to the furnace to feed the fires of the engine. There is seen little or no sawdust around the Saginaw lumber mills for the reason that it is all used for the furnace flames ; and, in general, the cycle of utilities by which one brauch of the great industry is made to feed or supplement another seems as rounded as human ingenuity can make it.

Sometimes, particularly in the more modern mills, the routine as described is varied by lifting the logs from the river on an endless chain ; and a number of minor mechanisms fill out the devices by which the lumber is cut and distributed. One ingenous machine working double emery wheels, sharpens the buzz saws on both sides of the teeth during a single revolution, and requires no attention beyond simply the the fastening of the saw upon it and unfastening after the work is doue. Another flattens out, by a clever mechauical expedient, the teeth of the saw, so as to cut a wider rent and prevent clogging as the cut becomes deeper ; finally, a system of elevated railroads takes the lumber-laden trucks and distributes the boards at the points in the yard or on the wharf whence they are to be shipped. Some additional conception of the size and importance of the industry may be derived from the fact that the Michigan Central railway company takes away from one station here one hundred car loads of lumber for each day of the working season, to say nothing of the large quantities shipped from the river by the Flint & Pere Marquette Railroad line, and even large shipments by the lake barges.—*The Wood-worker.*

HARDWOOD FLOORING.

The use of beech, birch, and maple has been restricted to a few specific purposes, but the example of the builders of the new Flint Mill at Fall River, in flooring with these woods, will probably be followed by others. The narrow Southern pine planks that have been so long and extensively employed for flooring require to be culled with great care to insure an even floor. They must be staight grained, or they will bend and splay by use, splintering into short slivers dangerous to the feet, and collective of all the fluff and fibrous dirt with which they come in contract. The heart of the pine is especially open to this objection. But a beech or maple floor will wear evenly and smoothly, and has greater endurance for heavy rolling weights than that of the Southern pine. It is more cleanly, and is not so readily inflammable.

The birch when properly seasoned under cover, or kilu dried at a heat not sufficient to vaporize its contained oil, makes a durable and evenly wearing floor. This cheaply estimated wood is really elegant also for furniture purposes. It shows well in cabinet work alternated maple or apple, and it is fully as valuable for drawers and chests in defending the contents from moths as is the red cedar. The best qualities of birch timber come from the black birch or the yellow birch, the white birch wood being too open or porous for fine finish or durability ; and the yellow and black birch grows also to a larger size generally.

The New York *Evening Post* says that the new building of the Pacific Mills at St. Lawrence, Mass., is to be floored with hard wood, some 300,000 feet to be used, and that other mills throughout Massachusetts, Rhode Island, and Connecticut, have also ordered this hard wood flooring, and it is very evident that Southern pine flooring will find a serious competitor. A good hard pine mill floor board, free of sap and coarse knots, will cost about $28 per thousand feet in large lots, according to the quality, while hard wood flooring will cost from $30 to $32 per thousand feet all dressed and delivered.—*Scientific American.*

THE POWER OF WATER.

The properties of water are only partially understood by those who have never seen it under high pressure. The Virginia City Water Company get their supply from Marlette Lake on the Tahoe side of the mountain. They get it through by a long tunnel, and are then on the crest of a high mountain opposite Mounte Davidson, with Washoe Valley between. To cross this valley by a flume would be almost impossible, so the water is carried down the mountain side to the bottom, and crosses under the V. & T. Railroad tract, on the divide between Washoe and Eagle valleys, then up again to the required height in iron pipes. The depression created in the line of carriage is 1,720 feet, and the pressure on the pipes is 800 pounds to the square inch. One pipe is 11 inches in diameter, and is quarter inch iron lap welded, and 18 feet long, with screw joints. There is little trouble from it, but the other, which is twelve inches diameter, and is riveted pipe, makes more or less trouble all the time. The pipe is laid with the seam down, and whenever a crack is made by the frost or sun warping it, or from any other cause, the stream pours forth with tremendous force. If the joint is broken open, of course the whole stream is loose and goes tearing down the mountain, but usually the escape is very small. The break last week was less than five-eights of an inch in diameter, and yet the water in the flume was lowered an inch and a half by it, and the pressure went down fifteen or twenty pounds. Captain Overton says that fifty inches of water went through it. It has been probably a year in cutting out, and was made by a little stream hardly visibly to the naked eye, that escaped through a joint and struck the pipe two or three feet off, eating away the iron until the pressure inside broke it through. When such a break occurs the noise can be heard for half a mile, and the earth shakes for hundreds of feet around. A break the size of a knitting needle will cut a hole in the pipe in half an hour. Such breaks are repaired by putting a band around the pipe, pouring in melted lead, and tamping it in. Such a stream bores through rock like a sand blast. The flying water is as hard as iron, and feels rough like a file to the touch. It is impossible to turn it with the hand, as it tears the flesh off the bones, and if fingers are stuck into the stream, with the point up, the nails are instantly turned back, and sometimes torn loose from the flesh.—*Reno Gazette.*

G. B. HALL & Co., Quebec, have sent out a member of the firm to explore the island of Newfoundland with the view of ascertaining the extent of its timber wealth, and its adaptability for utilization.

$500 Reward !

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w46111L92

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars ; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Proprietors, Toronto

HILL'S
English Extract of
BUCHU,
One of the Best
KIDNEY
INVESTICATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhœa in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms. Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

PRICE, $1 : or, Six Bottles for $5.

Send for Circular. Sold by all Druggists.

W. JOHNSTON & CO.,
161 Jefferson Ave., DETROIT, MICH.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy ; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

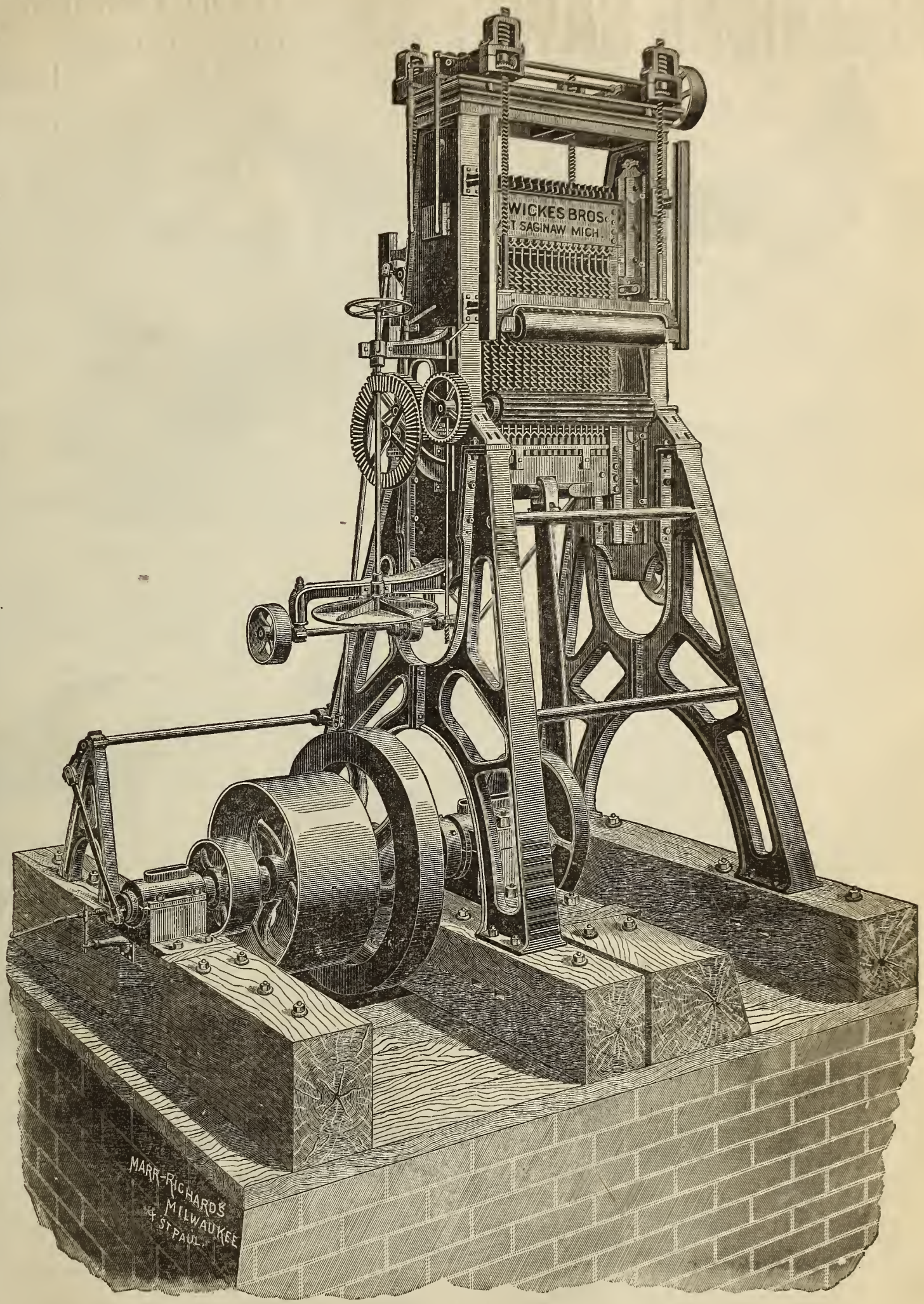
IRON FRAME GANG MILLS.

The gang mill is regarded as possessing material advantages in the rapid and economical manufacture of lumber. Among the recent improvements tending to perfect such mills, those which are shown in the iron frame Stock Gang manufactured by Wickes Bros., East Saginaw, Mich., are eminently valuable. Our large and elegant engraving represents one of these mills, constructed to be driven by belt, friction or direct engine, as may be desired. The important requisite in this class of mills is such design and proportion of parts as will insure durability and continued movement at the highest speed, safely increasing the quantity and improving the quality of work done at a lesser feed, and admitting the use of thinner saws than is practical in the slower moving sash. These are among the advantages gained in the iron frame machine, overcoming the necessity of an expensive mill frame, saving time and expense in setting up, and avoiding the liability of decay or change of position.

Many improvements have been made in the mechanism of oscillation, and from these the builders of this mill have adopted what is known as the Wilkin movement, which oscillates the top and bottom slides. The top slides are pivoted at the top end, and the bottom ones from the bottom end, both being operated by one rock shaft from the centre. This movement when properly adjusted gives an easy clearance and the easiest cut yet obtained. It adds no extra weight to the sash, and avoids the cumbrous rock shaft and its attendant joints, usually weighing from three to five hundred pounds, which have been found so objectionable in many other movements. The feed is continuous, and is made variable from ¼ to 1¼ in. to each stroke, controllable by the sawyer. Power is applied to the press rolls in the double screw form with pivot point, also operated by the same hand. A special feature of this machine is the spreading of the lower frame so that its base rests upon an independent portion of the foundation from the main pillow block or crank shaft. The solidity of the structure is thus increased, both by the increased width at the base and the prevention of connecting vibrations, which necessarily communicate when resting upon the same part, as in other forms of such machines heretofore in use.

The mill shown is one of 26 saws, 4½ feet long, sash 38 inches wide in the clear, and stroke 20 inches, capable of making 230 strokes per minute. The crank shaft is 9 inches in diameter, of the best forged iron. The main pillow block has a base 6½ feet long by 21 inches bearing, weighing 2,800 pounds. The cap is secured by two forged bolts, 3½ inches in diameter, and by this arrangement no unequal strain upon the cap is possible. A disk crank is used with suitable counterbalance, expressly adapted to the weight and speed of sash; a hammered steel wrist pin 5 inches in diameter, and a forged pitman of the most approved pattern, with best composition boxes. The iron drive pulley is 4 to 4½ feet in diameter and 24 inches face; the fly-wheel, 6 feet in diameter, weighing 4,700 pounds, turned off at rim. When a wider and heavier sash is required, a proportionate increase is made in all these parts.

In the construction of the sash the stiles are made of steel; the lower girt and upper heads are made in one solid piece, without rivets, giving greatest strength possible, with the least weight. The outfit also includes eight iron rollers for the floor, 8½ inches in diameter, with iron stands, and geared as live rolls when desired, a full set of Lippencott's steel saw hangings, and gauges for one-inch lumber. The weight of the machine here shown is 18½ tons. They are, however, built in larger or smaller sizes, adapted to any locality, quality or quantity of work desired.



IRON FRAME GANG MILL.

A Ship Canal

The bill for a ship canal to Manchester, England, has passed the House of Commons, burdened however with conditions which will make it a very uncertain enterprise. The promoters are required before commencing work to go to Parliament for a fresh bill showing exactly what work they intend to carry out in the estuary of the Mersey, they are also forbidden to do anything at the canal proper or to deviate any railways until they have progressed so far with the works in the estuary as to show what the effect on the regime of the channel and the approach to the Liverpool docks is likely to be and these works are to be so constructed that they can be removed if any detrimental effects are likely to be produced. The House of Lords will probably pass the bill in this form, but it will, we should think, be difficult to raise the large capital required, under such burdensome conditions.

A Half Million Fire.

WILLIAMSPORT, Pa., Aug. 27—A fire started this evening in the sawmill of Finley, Young & Co., and destroyed it. The flames spread to the lumber yards of Merriman & Son and others, burning over a square and destroying a large quantity of lumber. At midnight it was still burning, but with prospects of being subdued. Several dwellings and barns were burned. Twenty-five to thirty million feet of lumber were destroyed. The loss is estimated at half a million.

SUBSCRIBE to the CANADA LUMBERMAN.

AMERICAN SAWS:

We represent Four of the Best American Saw Factories

VIZ.

AMERICAN SAW Co.

Emerson, Smith & Co.

R. HOE & Co.

Hubbard, Bakewell & Co.

Inserted Tooth,

BIT TOOTH,

AND

SPECIALLY

THIN

SOLID SAWS

☞SAVE YOUR TIMBER

By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute, on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW

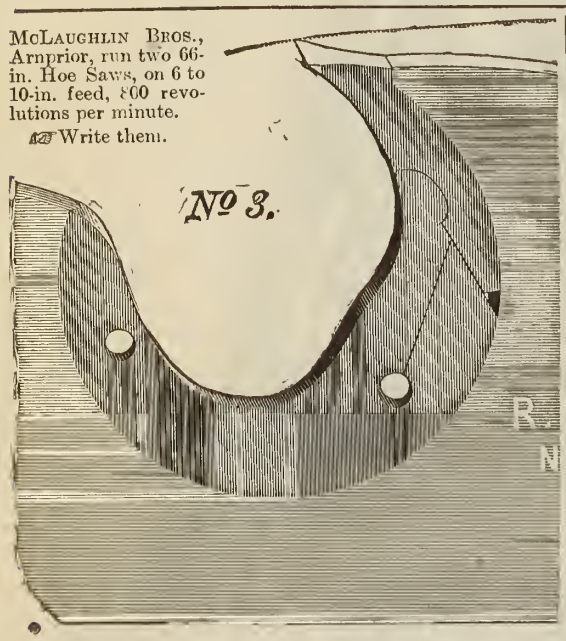
With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. EXTRA BITS (per 100) No. 1. $9; No. 2, $8.— (per 1000), No. 1, $80, No. 2, $70.

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

McLAUGHLIN BROS., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

☞Write them.



HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut repesents usual size tooth, one size largor and smaller made. ☞Send for particulars and prices.

SAVE TIMBER

GROW RICH

EMERSON'S EXTRA THIN SOLID SAWS

Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56; 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☞NO EXTRA PRICE FOR THIN SAWS.☜

EMERSON'S LUMBERMAN'S CLIPPER SAW

Can insert one tooth for every inch in diameter of Saw.

Extra Teeth 25c. each.

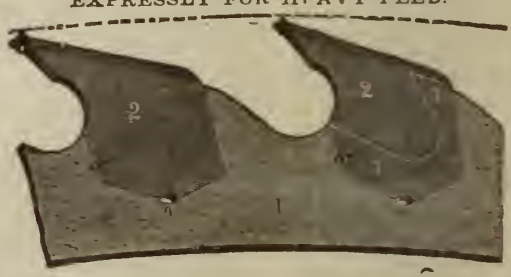
Extra Teeth 25c. each.

Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

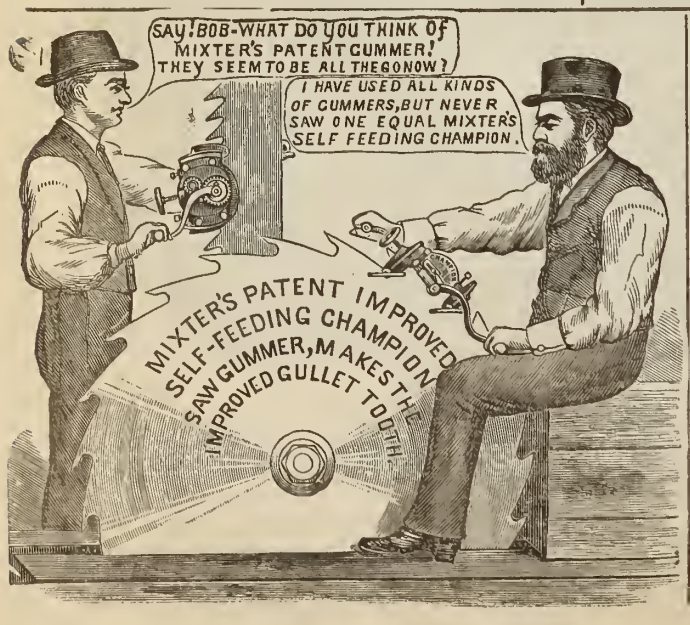
The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED.

Extra Teeth 50c. each.

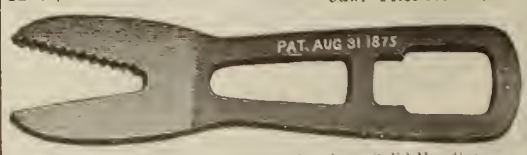


Two and a half inches long



Alligator Jaw Wrenches

5 sizes, grip from ½ to 3 inches. Iron. Solid Steel Jaw. Price 50c. to $5 50.



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PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 3. PETERBOROUGH, ONT., SEPTEMBER 15, 1883. NO. 18.

A TOW 1,200 FEET LONG.

The large sea-going towboats, Cyclops, Captain Lounsbury, and the Bertram T. Haviland, Captain Gully, from St. John, N. B., were this morning off Chatham Light, Cape Cod. The raft which they are towing to this city was reported to be intact, and they were making an average speed of sixty miles a day. They expect to arrive in New York early next week. On Saturday last the towboats encountered a severe northeast gale off Cape Elizabeth, and the hawser with which they were towing the raft parted. This necessitated about four hours' delay, until they could pick up the parted hawser, and pass to the tow two hawsers, one leading to each steamer. That day the boats put into Portland, owing to the heavy weather, but on the day following they resumed the voyage. From that time until last night nothing was heard of the tow, and fears were entertained that the raft had been lost or cast adrift by the towboats.

The great danger to be feared was the probability of a heavy sea being encountered. The raft itself is about twelve hundred feet long and thirty feet wide. It draws nearly eight feet of water. It is divided into sections of about 70 feet in length. The sections are cribs, into which, when they were made at St. John, the logs [about 65 feet long by 16 inches in diameter at the butts] were rolled and stowed. Then over and around the cribs strong chains were fastened. Between each crib there is a ten-foot space to permit free working of the raft in a heavy sea, for, in the length of 1,200 feet which the raft covers, during a storm there may be ten or twelve different large waves, and, were the raft all of one piece, there was every probability that before they had gone 100 miles it would become a wreck.

In the raft are twenty-four cargoes of 250 tons each. Were the contractor who owns it to have the spiling, of which the raft is composed, brought to New York by a sailing vessel it would have cost in the neighborhood of $26,000, as the vessels that are engaged in this kind of business demanded, on account of the enormous length of the logs, extra compensation, they not being able to take as much as a full cargo. This the contractor, Mr. James Murray, of Burling slip and Front street, refused to accede to and chartered the tugs Haviland and Cyclops. The tug Haviland belongs to Mr. W. H. Tebó, corner of South street and Coenties slip; the Cyclops belongs to Captain C. C. Ellis, of No. 60 South street. Mr. Murray, when asked for information concerning the venture refused to have anything to say, stating that he had rather wait till the boats arrived in New York before making any statement. Mr. J. C. Ellis, son of Captain J. C. Ellis, of the Cyclops, said this morning that in the event of the undertaking proving successful, there would be a revolution in the coastwise timber trade, between New York and ports east of Boston. "By the mode of bringing this raft here which Mr. Murray had adopted." Mr. Ellis said, "there is a saving of some $8,000 or $10,000. The charter price of the tugs I am not at liberty to state, but they are hired by the day, and, of course, no matter how long it takes to bring the rafts here we will lose nothing. The tow left St. John on the 7th inst. and will be here Monday. Captain Bragg, of the Portland Line steamer Eleapora, which arrived this morning, reports that he met the raft about 30 miles northeast of Cape Cod; that at that time they were getting along splendidly. They laid their course straight across from Cape Elizabeth to Cape Cod, and the greatest fear of Captains Gully and Lounsbury was that they might be caught by an easterly gale and be carried down into Cape Cod Bay, where there were ten chances to one that tugs, rafts and all would be lost. But everything is propitious for us now and there is no doubt that the raft will be anchored safe and intact in New York harbor within seventy-two hours.

"If the thing proves a success," said one of the most prominent towboat owners in the city, "within six months you will see the finest fleet of towboats in the world ready for service between the ports east of Boston and New York. In New [Brunswick, of which St. John is the principal port, there is not one tug that can at all compare with our large ocean tugs, and it will be out of the question for them to attempt to compete with us. There is, of course, a considerable amount of shingles, laths, &c., that come by sailing vessels, and these undoubtedly will be left to the coasters, but the majority of the trade is done in spiling, of which, in a short while I hope we shall be the masters. St. John is about 800 miles, by water, from New York."

NORWEGIAN TIMBER HOUSES.

Mr. J. C. Wilcocks, of Plymouth, writing to the *Field*, says: "Since information on this subject was asked for I happened to meet the owner of the house mentioned, and some time since visited there. It is a most comodious country residence, having side walls reaching 6ft, above the level of the ground, with capacious cellarage beneath. The whole of the superstructure is of timber, excepting the partitions through which the flues of the stoves (also Norwegian) pass. These partitions are of brick. The walls and ceilings and doors are all of varnished wood, and the decoration consists of the stem and fruit of the wild strawberry plant, the effect of which is very good indeed, and much more opposite than any decoration of more elaborate character. The stoves are very much like in appearance to church towers in miniature, and stand off about 2 ft. from the brick flue walls; they are of cast open ironwork, allowing thus the heat to pass off into the room with the greatest facility, and an elbow flue carries of the products of combustion into the chimney, and peat and wood are the chief kinds of fuel used. The entire absence of draughts and facilitics for warming the building are both remarkable. The cost, I am informed by the owner, has amounted to about a third of that of an English-built residence of the same dimensions and accommodation. Fire insurance about 1s. per cent. extra. Externally the house is twice painted annually, owing to our extremely uncertain climate, combined with an exposed position to south and west winds. The interior ceilings and hall being entirely varnished, no dust or dirt adheres to this smooth surfice, nor is there any paper to soil or spoil. There is not a sign of damp in the house. Labour being cheaper in Norway than England, I imagine it cheaper to import a house from Norway than to prepare material in England."

Old Building Material.

The *Scientific American* says that an extensive trade in second-hand building material has been carried on uninterruptedly in New York city for fifty years, and is largely supported by build ers and joiners. The stone and brick of an old building is used in the construction of a new one, the lime-whitened bricks making the inside of the outer walls and the partitions, and the stone going into the foundations. But it is generally known that the inside woodwork is used again, frequently without radical alternation. Many builders prefer this old timber because it is thoroughly seasoned, having been defended from the weather and been subjected to the influences of a measurable even temperature for years. The richer woods which are admired for their color mellower tones by age and become more valuale as the years pass. Everybody knows that furniture of mahogany and rosewood that has outlived several generations is much handsomer than that made from new wood. But it has an added value as mere material. An article made from the old wood will remain its integrity in all its joints; its shrinking days are over. For the same reason the timbering, wainscotting and flooring of old buildings has an added value, although its selling price is less than that of new material.

New Method for Drying Timber.

Although steam-pipes are largely used in drying timber, hot air circulation is being introduced, and several improvements have been made in America in this mode of treatment. Professor Carvalho's method is described as follows: "A continuous volume of heated air is forced over the timber by means of a fan-blower, the temperature of which is gradually increased, until the boiling point of water is reached; then the water in the albumen or other substance is converted into steam. This degree of heat also coagulates the albumen, and the pores of the inner cells of the timber become filled up with the solid coagulum." The hot air is made to enter at the bottom of room, which is air-tight, and after circulating round the timber, and through the wood, is discharged through another pipe at the opposite end of the room. It is asserted that this method of drying does not discolour the wood, and is a preservative againt dry rot.

A Wooden Costume.

A very unique costume was made for the Oiympian Club carnival, Boston the entire outfit of dress, boots, mask, wig, and parasol being of wood. The chief garment was a princess dress made of various kinds of Spurr's papered veneers. It had a brocaded front and basqne and trimmings of knife-plaiting, fichus and loops of wood ribbon, and was ornamented with rosettes and leaves in wood of various shades in their natural colours. At the sides there was a substitute for embroidery in inlaid work of fancy designs. The sleeves were of cord paper, trimed to imitate puffing, and at the bottom was a deep border of black walnut knife-plaiting. The boots and gloves were of birch bark, and the mask of matched woods with a fringe of plaiting. The wig was composed of abont ten curls, consisting of white pine shavings artistically prouped. The parasol, of Chinese pattern, was covered with various coloured veneers, and similar lined. This attempt was thoroughly sucessful, the effect of the different kinds and colours of wood in the combination being very striking and artistic. The veneers were so thin that the costume was not very heavy, and so flexible that it was not liable to injury.

Cottonwood.

Cottonwood, it is said, will make four rails in seven to nine years, and maple the same in from eight to ten years. Cottonwood, soft maple and California redwood are regarded by many as the best trees for forest planting when quickness of growth is desired, and also when shelter belts around orchards, gardens, barns and stock yards are necessary. Many farmers have learned from sad experience that by cutting down their forests indiscriminately they have made the way clear for chilling, biting winds and frost to nip their growing fruit.

Another Trail.

A man in Washingtou, who, it is stated, has failed in business exactly 85 times, has now started to retrieve the last break in his fortune by engaging extensively in the lumber business in Florida. He has rented a dock in New York, and although 65 years of age is said to be pushing his new venture with the energy of a young man.

THE tug Alice M. Campbell towed 4,000,000 feet of logs for 40 miles on Lake Superior for the Oneota Lumber Company, without losing a log.

DISEASE AMONG SPRUCE TREES.

Tho following letter appears in the Montreal *Witness*:

SIR,—Mr. Vennor, in your number of the 18th, gives rather a novel cure by introducing woodpeckers and other tree creepers. Will he kindly let us know where these birds can be caught, and how caught? He can scarcely be sincere in proposing such a cure. Woodpeckers could never be trapped, and if he introduced a million in a grove of spruce, in a few hours there would be very few left in the grove, as they are continually on the wing, and the woodpecker is miles away in the evening from where he took his morning meal. Having some knowledge of the Maine timber lands and these localities, I may say the disease alluded to among the spruce trees arises from the fact that all the first and second quality spruce deals have been cut down all through Maine, and what has been left standing by the lumberman, were the faulty trees, culls and dead standing timber, which of course will be the favorite localities for the wood borer, of which there is a numerous family. One of the most destructive is the *Monohammus Confusor*, it is remarkable for the length of its antennæ, or horns, which sometimes are twice the length of its body, the latter being an inch and a half long. It is produced from a grub of a whitish color with a large broad head and very powerful jaws, with which it cuts into the trees. It attacks all newly cut timber with the bark left on and all injured timber, blown down, burnt and sickly trees. I had an opportunity of demonstrating the facts after a forest fire had passed through a considerable grove of mixed timber. The beetles in question made their appearance in large numbers and attacked all the fallen trees, depositing eggs in every crack and crevice or knot hole. The damage done by this beetle is in some instances enormous. I had one season several thousand pine and spruce logs which stuck on the drive. The waters getting so low they remained stranded on the rocks and beach till the following spring, and every log was attacked by them and bored from one to two inches inwards, which caused a loss of several thousand dollars on the value of the logs. The *Monnohammus Scutellatus* is another borer and more numerous than the one I have described, but the habits of both are similar. The *Chalcophora Liberta* and *Virginica* are also wood borers. I never knew the Coddling moth or worm to attack the forest trees. It is known to be most destructive to the apple, as it makes its attack upon the fruit. The insect deposits its eggs in the apple blossom, the eggs are soon hatched and penetrate into the growing fruit. Every apple grower knows something of its ravages. I made an extensive exploration through the Canadian forests bordering on Maine and found the spruce trees, both scattered and in groves, in a perfectly healthy state and did not see any signs of the disease referred to. Mr. Vennor's cure by woodpeckers would only be making the evil worse and the trees less valuable, as the woodpecker makes a considerable hole in the tree before he can reach the grub with his speared tongue. The prevention must be with the beetle, not with the grub. In May the beetle comes out of the grub in immense numbers. The crow is the only bird that devours them. Hens and turkeys eat them also. I have seen them in the new settlements, where the slash has been made during the winter, running and flying from tree to tree devouring the beetle most vigorously.

CHARLES HUGHES.

Montreal, 25th August, 1883.

FORESTRY IN AUSTRALIA.

The colonies of Australia are awakening to the importance of forest conservation and restoration, and South Australia is the first to establish a system of forestry, that promises good results. Legislation upon this subject, was begun in 1871, when Mr. Krichauff, M. P., called for a return, eliciting information from persons resident in the different districts of the colony, in regard to the supply, preservation, and culture of forests. The answers were prepared by Dr. Schomburgk, director of the Botanical Gardens at Adelaide. In 1873 he introduced a bill, and secured its passage. It was entitled "An Act to Encourage the Planting of Forest Trees," and provided for the payment of £2 per acre for every acre planted by a land-owner in certain districts of the colony, upon certain conditions specified. A report on Forest Reserves was submitted during the same session, prepared for the Hon. the Commissioner of Crown Lands, by G. W. Goyder, Esq., the Surveyor-General, in which it was suggested, that certain portions of the country should be set apart by proclamation as Forest Reserves, and the subject of the formation of a department of forests, was discussed at length.

In 1875, a bill was brought in by Mr. Krichauff, and passed, entitled "An Act to make Provision for the Appointment of a Forest Board, and for other Purposes." It defined the districts pointed out as proper for forest reserves, in the previous report of Mr. Goyder, and specified the duties of the Board. It did not, however, survive long enough to test its merits, and was superceded, in October, 1878, by the "Forest Trees Act," and this again by "The Woods and Forests Act of 1882," which has been passed during the current year.

A cumbersome arrangement under the Forest Board having failed to meet the requirements, the three non-official members resigned; upon which the Government, considering that the operations of the system could be better conducted by the Conservator of Forests, placed directly under the Honorable Commissioner of Crown Lands and Forests, this mode of management is now in operation.

The principal fault of the system appears to consist in the smallness of means provided, amounting we believe, to about £5,000 per annum. This, when applied to the expenses of office management, and to the care of something like 240,000 acres, of which two-thirds are timberless, or covered with a useless growth of dwarf Eucalypti, Acacias, and the like, should not raise great expectations of grand results.

From the official report for 1881-2, it appears that there were then 19 Forest Reserves, containing 239,336 acres, which, with the exception of the Travelling Stock Reserves, were all leased for pasturage purposes at rates ranging from ½d, to 2s. 8d. per acre. There were four well established nurseries, having together an area of about 20 acres. Planting, and other forest conservancy operations, were being conducted upon eight reserves. The force consisted of three foresters and four nurserymen, with an average force of 25 laborers. About 4,043 acres had been enclosed and set apart for planting and other forest operations. The average income from the Forest Reserves, in the last six years, had been £5,581, and the expenditures of the board, £5,787. About 440,000 young trees were doing well, from the results of the board's planting; some 300,000 saplings and seedlings of natural growth had been pruned, in connection with the system of encouragement for the renovation of the indigenous forests, and about fifty thousand seedlings of natural growth had been reared in the Natural Regeneration inclosures.

The following extract from regulations, dated January 13th, 1879, and applicable to the Wirrabara Reserve, will prove of interest to our readers:

1. All standing trees disposed of by the Forest Board in this reserve, by private contract or otherwise, must be previously marked by the Conservator or officer in charge.

2. The official mark will consist of a longitudinal chip taken off two opposite sides of the tree and stamped F. B. in distinct characters.

3. Each tree must be cut off from its base at a height not greater than two feet from the ground.

4. In cutting down trees, care must always be taken to fell them in such a manner that they will not interfere with or injure any of the other trees, saplings, or seedlings, left standing on the ground; and should any damage arise in this way from the carelessness of the workmen, the officer in charge of the reserve (whose decision on such matters shall be final) is empowered to value such damage at a rate equal to the deterioration effected, and collect the amount from the party to whom the tree felled has been sold.

5. Any party or parties found felling trees which have not been marked and sold to them, will incur a penalty of not more than five pounds, in addition to the value of the material.

6. No purchaser shall be permitted, on any pretense whatever, to light fires within the forest, except on such sites and for such special purposes as shall be defined by written permission from the conservator.

7. The purchaser of any tree must remove the whole of the same that is convertible into a marketable commodity, and pile together all refuse ready for burning, to the satisfaction of the forest officer. Any breach of the two last regulations, will incur dismissal from the forest.

8. Purchasers will be allowed sufficient time for the removal of their timber from the forest. This time will in all cases be specified and entered in the forest sales book. Should any purchaser fail in having it removed within the period stated, then it will be optional for the officer in charge to declare it forfeited or give an extension of time for its removal.

9. Splitters applying for timber, on satisfying the Conservator of their respectability, and on giving a guarantee that they will not attempt to evade the regulations, will be allowed to erect temporary huts on such sites as the Conservator shall deem expedient; but they will not be allowed to keep stock of any kind in the forest further than may be necessary at certain times for the removal of their timber to market—this to be decided by the Conservator, whose decision shall be final.

10. All standing timber will be sold per cubic foot, or in lots by valuation, to suit purchasers.

11. As soon as the trees are marked and sold, they will be at the entire risk of the purchaser; but the purchaser will not be allowed to cut or ring trees bought, until a proper settlement for the same be made to the satisfaction of the forest officer.

12. All sales amounting to less than £2 to be paid for in full before the timber is interfered with; and all sales realizing more than that amount, the purchaser shall pay half such sum in advance, the remainder before any of the timber is removed from the ground.

13. Sites for the erection of saw mills will be granted on payment of a nominal charge per annum, and licenses given for materials, sinking wells, erection of huts, and stabling for accommodation of horses used in the haulage of timber. Special arrangements for the purchase of timber will be entered into with parties erecting saw mills.

14. Sites for the erection of saw-pits will be granted free of charge, with liberty to erect temporary camps and depasture working bullocks actually employed in the hauling of timber, etc.; all subject to approval of the Conservator.

15. Licenses to split posts and rails from dead wood in localities named in body of licenses, will be granted at 20s. per annum each, with an additional fee of 10s. per 100 for all posts and rails removed from the forest.

16. Licenses to procure straining or corner posts of dead timber from localities to be named in license, will be granted at 1s. for each post.

17. Licenses to remove firewood from the dead timber lying upon the ground from localities to be named in body of the license, will be granted at the following rates:—

8s., for one horse load;

1s. 6d., for load of two horses or bullucks;

2., for load of four horses or bullock;

4s., per load where more than four horses or bullocks are used.

STONE, SAND AND GRAVEL.

18. Licenses to remove stone, sand and gravel, will be granted at 20s. per month each.

19. Splitters will be allowed to erect temporary huts only in the forest, and only on such sites as may be approved by the Conservator.

New regulations dated March 20, 1883, and received too late for further notice in this number, have been issued under the Woods and Forests Act of 1882. They vest in the Conservator of forests, their immediate control and management, the sale of timber, employment of laborers, etc., but subject to the approval of the commissioner of forest lands.

These regulations forbid the lighting of fires for any occasion during the summer months (May to October), and provide for the sale of licenses for various purposes, besides the cutting of timber.

LAKE ST. JOHN VALLEY.

In an account of the Lake St. John Valley a special correspondent of the Toronto *Globe* says:—

"The forests around Lake St. John contain pine, elm, tamarac, ash, spruce, cedar, basswood, fir, white poplar, birch, and some hard maple. This, says Michaux, is the most northerly region where white spruce and cedar have been observed. White pine is found in abundance, and hemlock literally fills the forest. Poplar sometimes attains a height of 80 feet and a diameter of three feet. Mr. Robert Bell in 1858, reported that acorns were found on the shore of Lake St. John, showing that oak must exist on some of the rivers.

In his description of the town of Chicontimi the same writer says:—

"The Government pier, at which the steamboat lands, is at the end of a cross street, half a mile from the Court house, and a mile east of the old Hudson Bay post. This pier was commenced in 1873, by the St. Lawrence Tow-boat Company, and completed by the Dominion Government, by whom it is now maintained. The total Government expenditure upon this work to date has been $17,017. The depth of water at the end of the pier was originally ten feet, but it has since been reduced to seven feet by slabs and sawdust from the mills above. The tide rises for some distance above Chicoutimi, and sea-going vessels can ascend with a draught of ten feet during low water, and with a draught of 18 feet during half tide. The Marine Hospital, a two-story brick structure 35x45, will be finished this year. It is situated on the top of the hill in the rear of the College, and is opposite the stone monument erected to the memory of the late William Price. In consequence of the depositing of slabs and other refuse in the Saguenay, it has been found necessary to take steps to clear the channel. The total expenditure by the Dominion Government upon the improvement of this channel up to 1882 was $13,559. No less than from twenty-seven to forty-five ocean vessels, besides many schooners, have come to load lumber at Chicontimi every year since 1872, and at the smaller ports lower down quite a number also obtain cargoes."

EXTENSIVE PLANTING.

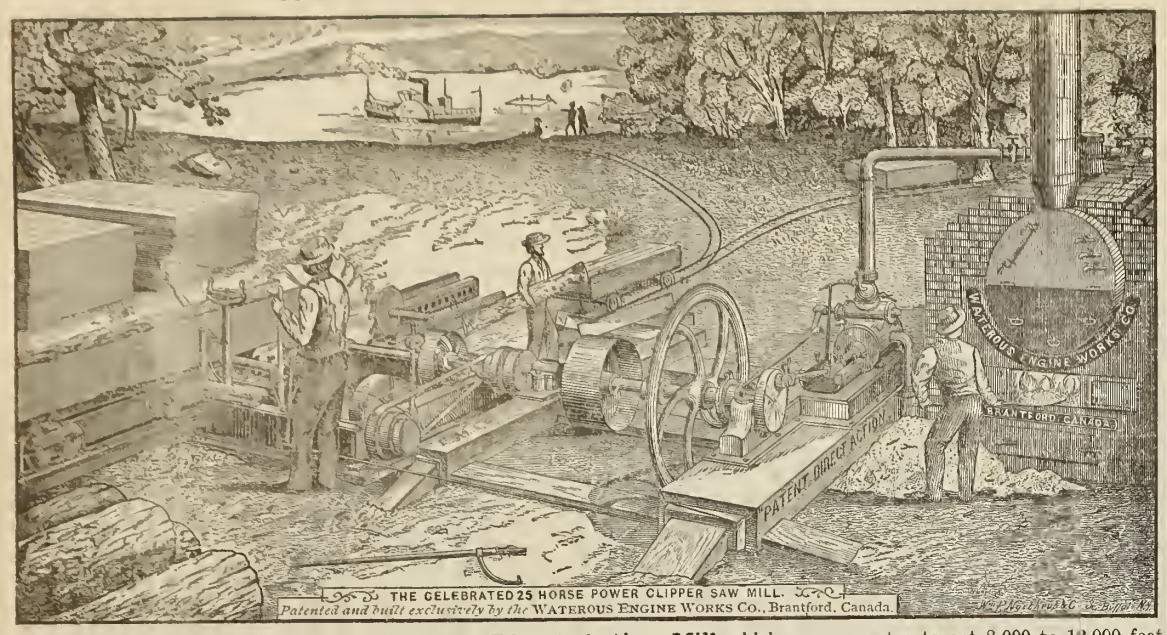
The *Lumberman's Gazette* says:—Nebraska believes in forestry, and demonstrates the strength of her belief by practical results. On the last arbor day 500,000 trees were planted within her territorial domain, which, if they arrive at maturity, will not only furnish lumber for building purposes in the future, but will be of inestimable value to the people in the cooling shade they afford and the protection against the biting blasts of winter, but their climatic effects possibly will never be measured. As much attention to this question in all the states and territories as in Nebraska would very much tend to relieve that great source of an anxiety,—the denudation of the American forests. Kansas last year also came to the front nobly in this connection by planting 93,000 acres with timber. The constant agitation which has been so persistently maintained in the class of journals of the country is thus bearing excellent fruit.

The Pacific Coast.

The lumber industry, says the San Francisco *Journal of Commerce*, is going to be *par excellence* one of the great industries of our Pacific coast future. There is no region on earth except tropical South America that possesses anything like the forest that clothes the great mountain chain whose principal summits rear above the deserts of Arizona. These are fully 700 miles of mountains covered with virgin forests, which it would seem as if the whole world could not exhaust. The estimated quantity of lumber contained in these forest is not less than 4,032,000,000, or 4,000,000,000 feet, worth in log, at a very low estimate, $25,000,000,000. California itself has 12,000,000 acres of woodlands, the annual production being about 500,000,000 feet. The total average product of the coast is estimated as follows:—California, 500,000,000 feet: Washington, 300,000,000; Oregon, 2000,000,000: British Columbia, 50,000,000: other sections, 60,000,000—total, 1,110,000,000 feet. The value of this for export is about $10,000,000.

Semi-Portable and Portable Direct Action and Belted Saw Mills!

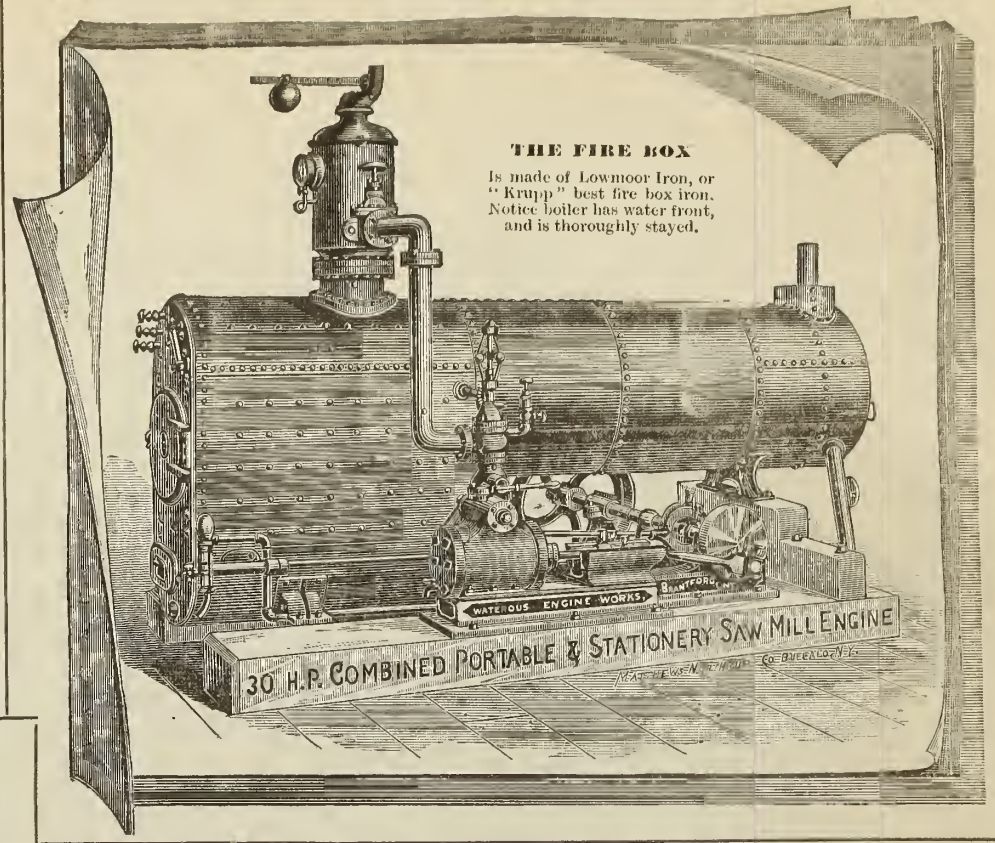
TEN DIFFERENT SIZES.



THE CELEBRATED 25 HORSE POWER CLIPPER SAW MILL.
Patented and built exclusively by the WATEROUS ENGINE WORKS Co., Brantford, Canada.

Above cut represents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

☞This Cut represents the Engine furnished with Nos 8, 12, 16 and 18 Saw Mills.

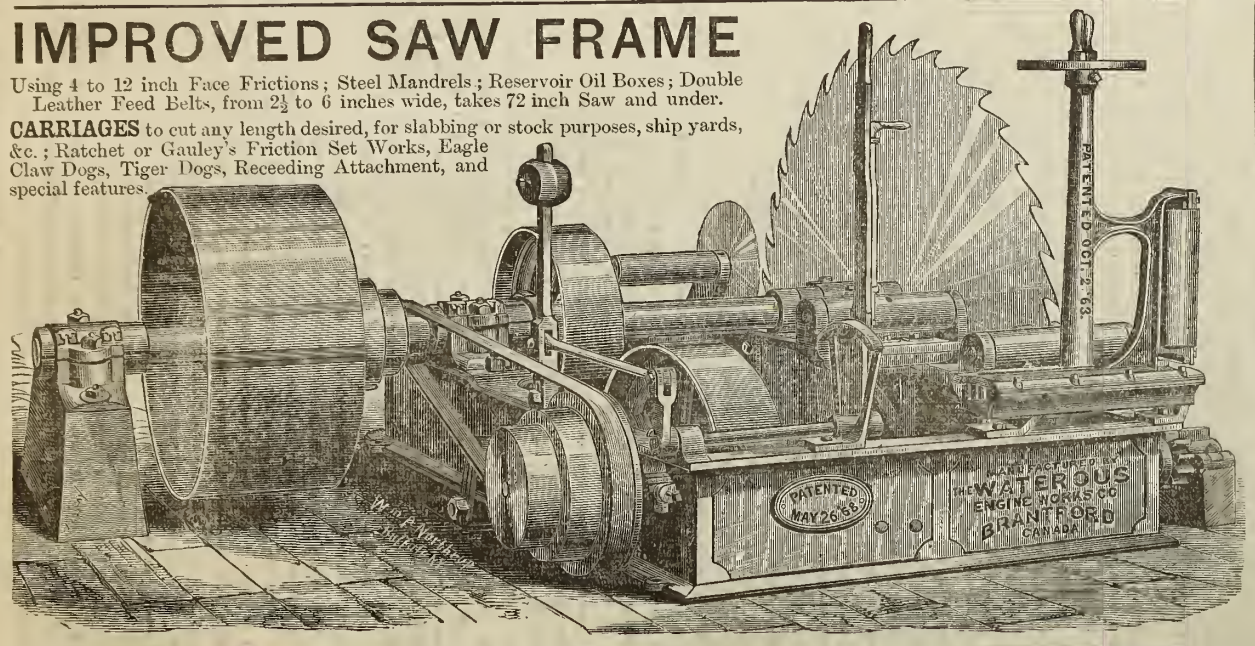


A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec.
Also, W. & R. Wallace, Gardner's Creek, N.B., with 60 foot Ship Yard Carriage.

IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

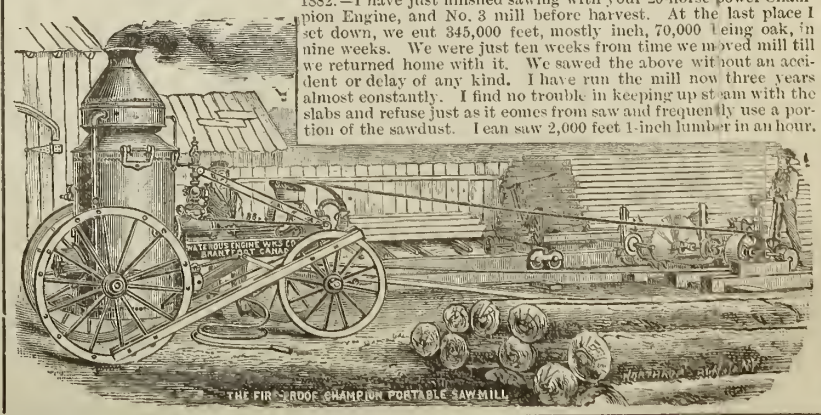
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
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FORESTS OF NORTH AMERICA.

It is only within the last few years that public attention has been directed to the subject of the preservation of the forests and that efforts have been made to stay the wholesale destruction of trees, which threatened before long to denude the country almost entirely of its woods.

The mere utilitarian will regard the matter of consequence only from his industrial standpoint, and will regret the destruction of trees from a consideration of their marketable values, relegating to the scientist the more abstruse and less tangible reflection of the climatic and other effects of such denudation. That the latter consideration is not the least important is becoming now evident, when it is almost too late to remedy the evil. Whole sections of the country have been divested of their natural summer vesture of foliage, except in isolated patches, and the consequence has been a decreasing rainfall, a more dry and less fertile soil, while it is also generally admitted that in such sections the climate is less salubrious than previous to the clearance of the forests. Æsthetic considerations, it is presumable, ought to weigh less in the public estimation, still to many it is a subject of sincere regret that the charming variety and beauty of wooded hills and valleys have wholly disappeared in large areas all over the country, and that cool shade and summer foliage may be found frequently more readily in the environs and parks of cities than in the country. The sameness of aspect and absence of scenic effect resulting from the disappearance of the forests has seriously marred the beauty of the country, and in the level sections the uniform, dull monotony of the landscape is only relieved by an occasional orchard surrounding the farm houses from an unvarying uniformity totally destructive of beauty.

GEOGRAPHICAL DISTRIBUTION OF TREES.

The Continent of North America possesses a great variety of forest trees, so many as 340 different species being known to exist. Of this number about 100 species exist in Canada, its less varied climatic conditions precluding such a general diffusion of arborescent growth. Some species of trees are not only widely diffused but are persistent over great areas, being found almost everywhere within the limits of their distribution, while others although having an extensive range are nowhere very common and are sometimes absent for considerable intervals. Other species are confined to comparatively small tracks, or appear in detached sections, where the nature of the soil and the locality is favorable to their growth.

As a general rule the more northern species occupy the greatest extent of country, while the southern ones are more and more restricted as we proceed south. This is owing to the great difference existing in climatic conditions in going from the east to the west in the more southern latitudes. Along the northern borders of the forests of the continent the elevation of the land above the sea level is more uniform and comparatively slight, and other physical conditions are tolerably regular. As a consequence of this we find the most northern group of trees extending from Newfoundland to Alaska—a distance of 4,000 miles.

The study of the distribution of the various forest trees possesses an interest even to the geologist, as bearing upon questions in regard to the condition of the continent in later geological times. The outlines of the areas occupied by the different species and other circumstances connected with their characters and distribution may throw some light on their dissemination from certain centres or lines, or possibly in some cases their contraction from wider limits, or it may be found that some of them still have a tendency to retire or to advance.

FORESTS IN CANADA.

The correctness of the Frenchman's prevision, of the time of Jacques Cartier, would no doubt be questioned who would predict within even centuries the disappearance of the apparently interminable forests extending in almost unbroken solitude from the Atlantic to the Pacific Ocean. The continuity of the vast canopy of foliage was only occasionally broken by meadow marshes, and the small clearances of underwood surrounding the wigwams of the aborigines. In other sections the vegetation was so luxurious that only an occasional gleam of sunlight could dart through the interspaces of the thick mantle of green to the ground below. Then, as now, the vast prairies in the centre of the continent were destitute of trees, but to the Frenchman first landing in Canada, and his progeny for more than two centuries, these regions were a *terra incognita*, far removed from the range of vision and observation. So far as he had penetrated during over two hundred years the vast sea of foliage, extending everywhere, swayed and quivered in the sunlight, or changed from the light green of early summer to the darker shades as the season progressed, finally ending in the vermillion, carnation and the thousand various tints that still throw a glamour of glory peculiarly their own over Canadian forests preceding the fall of the leaf. Into those sublime and gloomy solitudes, undisturbed save by the whoop of the savages, the howl of the beast of prey, or the moan of the wind through the needles of the pine, the Trappist Fathers penetrated, and, far removed from the verge of civilization, acted as the pioneers of progress in sacrificing the comforts of life, and frequently life itself, in their noble efforts to Christianize the heathen.

Habits of self denial incalculated by their order, and a gloomy asceticism which had nursed religious ideas until they became a second nature, peculiarly fitted them for such a work. Social ties they had few or none, and the dominating idea or object of their mission became so all absorbing as to render a life long residence in those profound and gloomy forest shades the only phase of existence they could really desire. Their day has long since gone by, but the historian who would fail to credit them as the pioneers of the now existing age of progress would be guilty of an act of injustice as well as of falsifying the records of the past.

At the period of the conquest of Canada by the British in 1759, the forest had been cleared only from detached sections of the country adjacent to the St. Lawrence, but in no instance had the labor of the colonists extended to any considerable distance from the river toward the interior. At that time Upper Canada was an unbroken wilderness, the few settlement that existed being restricted to the banks of the St. Lawrence and the shores of Lake Ontario and Erie.

WOODS OF ONTARIO.

So late as 1850 the Western peninsula of Upper Canada (now Ontario) was a tree covered expanse, the settlements being confined to the shores of Lake Huron, Simcoe and the Georgian Bay. Since then, however, the progress of the settlement has proceeded with such rapidity that but few sections remain now unoccupied. As the trees formed the primary and chief obstacle to cultivation it was but natural that the squatter would regard the forests with no favor, and that he would in consequence direct all his energies to the speedy clearing of the land and the destruction of what involved years of the hardest labor before he could expect any but the most meagre returns for his toil. All that he cared for was to leave enough of the timber for fuel and for rails, and such was and is the existing dislike to trees that the spontaneous growths of such along the fences and boundaries of farms were and are ruthlessly destroyed. So much is this the case that in large areas in Ontario some of the farms are entirely destitute of timber, even pasture fields being unprovided by a solitary tree to shade the cattle from the glare of the noon day sun.

A reaction, however, has set in and the idea has dawned upon the public mind quite recently that the wholesale destruction of the woods is a great evil, and efforts are now being made to retard the process as much as possible where it is now in progress, or to partially remedy the evil where it has gone too far.

This spring a number of advanced thinkers inaugurated a movement looking to a partial restoration of the destroyed forests, and an "arbor day" in all the large cities of the Dominion, and towns and villages, will doubtless result in not only making tree planting fashionable, but will, before long succeed in enhancing the beauty and salubrity of the country.

In the uncleared portions of Ontario the forests present a remarkable richness in the number of species to be found growing together. In some localities as many as fifty different kinds are to be found on one farm. Maples, elms, beeches, basswood, with a proportion of evergreens, the hemlock and balsam being the most common, except where the pine flourishes. The underwood is usually of the same species as the larger trees, unless on low ground, where other varieties peculiar to such localities prevail. In isolated places, where the nature of the soil is suitable, groups of wild cherry, butternut, oak, white and black ash, birch and many other trees grow luxuriantly and attain great dimensions. The forests of Ontario are, however, now but shadows of what they were, and the glory of their foliage and the mysterious depths of their dim umbrageous spaces have disappeared before the woodman's axe and firebrand, and like other vanished things, good and bad, have been consigned to the region of the past. The pioneer now recalls, with visible pride and a sigh for his departed strength, the time forty years ago, when he carried the flour for the sustenance of his family a distance of forty miles through an almost trackless expanse of wood to his steading on the shores of the Georgian Bay or Lake Huron. He recalls also with regret that early period when life, even with all its hardships, was happy and free from care, and primitive wants, few in number, were almost entirely supplied from the virgin soil, and he and his family, if possessing fewer luxuries, had fewer desires, and the free and exhilarating air of the forest, a simple diet and constant occupation precluded those enervating influences so frequently accompanying the more complex and luxurious modern style of living.

LUMBER SUPPLIES.

Commercially considered the most valuable products of the Canadian forests are the pines which have now been very effectually culled from the settled portions of Ontario and other parts of the Dominion. With the exception of detached clumps scattered over the inhabited part of the country, the lumberman must now seek his supply in the region of the Upper Ottawa, in the Nipissing and Muskoka districts, and in the occasional patches existing on the north shores of Lake Huron and Superior, British Columbia, Quebec and New Brunswick. The dense pine forests in the latter provinces have virtually disappeared, while the supply from Quebec, never large, is now less than ever before.

Still, the quantity of lumber now exported is larger than a number of years ago, which is doubtless owing to higher prices, more vigorous prosecution of the trade in lumber, and the extension of the labour of the lumberman to newer and more distant forests, which now, instead of supplementing the ordinary production, are almost the sole sources of supply. That the limit of the production of pine has now been reached in Canada is generally conceded by experienced dealers, and they contemplate with anything but a feeling of satisfaction the approach of the time, by no means distant, when the most difficult problem presented to them for solution will be that of supplying the market demand for lumber when the sources of supply have become exhausted. That this exhaustion is now taking place at a rate that seriously threatens the complete extinction of this valuable tree at no distant date it is needless to deny, and it is quite as undeniable that the geueration now living, the present process of destruction continuing unabated, will witness the supply so seriously impaired as to make pine lumber too valuable to be applied to many of the uses for which it is now considered indispensable.

The same destructive influences are at work in our own country, and the day is probably not far distant when the principal sources of pine in Maine, North Carolina, Michigan, Oregon and other sections, shall have become exhausted, and the builders will be confronted with the difficult question of supplying the place of boards by other materials combiniug their advantages of lightness and ease of workmanship with cheapuess.

Next to pine, hemlock is the most valuable tree to the builder, for the rougher sorts of lumber. It existed in conuection with hard wood over a more uuiform and extended range of country, but never like the pine in separate sections, to the almost entire exclusion of other species of wood. It has now become almost as scarce as pine in many sections, and on farms where thousands of trees were destroyed the owner would now find it impossible, unless in rare instances, to secure sufficient hemlock to furnish lumber for the erection of a barn. Maple, one of the most valuable and most plentiful of Canadian trees, is also rapidly disappearing, the vast quantities used for fuel and firing purposes on trains, added to the quantities destroyed in clearing the bush lands, having reduced this most useful and beautiful of trees to straggling and narrow limits.

TREES OF BRITISH COLUMBIA.

The most valuable trees in British Columbia are the Douglas spruce, yellow and red pine, which extend from the Pacific to the Rocky Mountains. The other varieties of trees are the western larch, found in the Rocky Mountains and the valley of the Selkirk and Gold ranges; hemlock and vine and other maples, and western scrub pine, which forms dense groves in the interior of the province.

Douglas spruce, commercially known as Oregon pine, is the most important timber tree of British Columbia, and is the only one of which the wood has yet become an article of export on a large scale. It is found in all parts of Vancouver's Island, with the exception of the exposed Western coast. On the mainland, near the 49th parallel, it extends from the sea to the Rocky Mountains, being found even growing at an altitude of 6,000 feet in a stunted form. In the dry southern portions of the interior it is confined to the higher uplands between the various river valleys, coming down northward to the general level of the country. The best grown specimens are to be found near the coast in proximity to the numerous bays and inlets by which it is indented.

In those places it forms prodigious and dark forests, the foliage being so dense as to be impervious to sunlight. The trees here attain very large dimensions, many of them being over ten feet in diameter and two hundred to over three hundred feet high.

REGION NORTH OF THE LAKES.

The region north of Lake Huron is generally timbered with beech, maple, pine and cedar, where the land is fertile, but as a great extent of this section is sandy and rocky, the area of timber is rather detached and restricted. At some distance from the shores of Lake Superior and extending from Sault St. Marie to Fort William, a large portion of good rolling land, occasionally broken by trap rock, and heavily timbered exists. On approaching the lake the country becomes mountainous and barren, varied at intervals with richly wooded fertile acres.

The Nepigon River, the largest to the north of Lake Superior, takes its rise in Lake Nepigon, and flowing through several smaller lakes empties itself through a wide, deep channel into Nepigon Bay. Adjacent to its banks are many fine white and Norway pine and other varities of trees. The river swarms with tront, weighing from one to twelve pounds each, and in it and the surrounding lakes and rivers the most enthusiastic disciple of Isaak Walton would find ample means for enjoying his favorite sport.

Lake Nepigon, 120 miles long by 60 wide, is dotted with beautiful islands, some of which are very large and heavily timbered. The coast of the lake is generally mountainous and barren and but sparsely wooded.

Black Sturgeon River, connecting Lake Nepigon with Lake Superior, flows through a valley about six miles wide, which contains excellent soil, composed of disintegrated trap rock, ot which the surrounding hills are composed. The adjoining country is wooded with large birch, elm, poplar, spruce and balsam trees.

The Kamanistiquia, the only river on the Canadian side of Lake Superior that is navigable for vessels for any distance from the mouth, flows into Thunder Bay at Fort William. For the latter part of its course it winds through a rich valley of alluvial soil, between banks varying from five to forty feet in height. The valley is covered with a profuse growth of elm, ash, poplar, birch, spruce, pine and a thick underbrush of flowering shrubs.

This region of couutry is the sportsman's paradise, and is becoming yearly more fashion-

able as a favorite retreat in which to spend the warmest period of summer. Tourists from New York, Boston and Philadelphia, as well as from the principal Canadian cities, have discovered it to be an excellent fishing and hunting ground, and are high in their praises of the coolness and salubrity of the climate and the unparalleled facilities for fishing and shooting.

THE WOODS OF MANITOBA.

The largest portion of the area of the Province of Manitoba is entirely destitute of timber, and in sections where trees do exist they are crowded together along the margins of the rivers and lakes.

The principal tree in the woods is the poplar, the next in importance is the oak, and near the rivers will be noticed large elms. One of the most beautiful trees of this locality is the ash leaf maple, its fresh, green leaves opening out quite early in the spring. It is a most vigorous grower, bears transplanting well, and were its qualities better known would be valued as an ornamental shade tree in any northern country. In the spring the ash leaf maple yields a sweet sap from which superior sugar and syrup are made, but, as the flooding of the river occurs at this season of the year, the trees are difficult to reach in order to secure the sap. On the shores of the streams which enter the Red River, and especially near their mouths, basswood grows in great abundance, and ironwood of a large size can be met with. Commercially, the trees of Manitoba are of but inconsiderable value, and even used for fuel are but indifferent substitutes for the maple and hard woods of Ontario.

HUDSON BAY AND OTHER SECTIONS.

It is not generally known that valuable forests of white, red and pitch pine, black and white spruce, balsam, larch, white cedar and birch exist along the banks of the rivers emptying into James Bay, one of the arms of Hudson Bay. That these woods will be utilized in the near future is not at all doubtful. The head of Hudson Bay is nearer the fertile country of the northwest by 1,500 miles than Quebec, and already the project of connecting the interior of the continent by rail with Hudson Bay is mentioned, and will become no doubt an accomplished fact before long. Recently Dr. Robert Bell, the well known geologist and veteran explorer, made a survey of a large portion of the coast of the bay, and in his opinion, based upon observations then and upon information gathered at various times during his explorations in the North, is that the bay and straits are perfectly navigable for a large part of the year, and that the passage is probably open both winter and summer.

Other well wooded localities are the Manatoulin Islands and the Nipissing and Muskoka districts. These sections, however, merit no special mention as the extent of timber is but limited.

The reference made to the woods of Ontario would apply with but slight modification to those of Quebec, New Brunswick and other portions of the Dominion which have not been noticed in detail.

The same destructive influences have likewise been at work in those places, and the country has been rapidly denuded of its timber. Forests have been swept away until scarcely a trace of them is left, and now complaints are made of a scarcity of wood for fuel and lumber, where, not so long ago, the ground was completely covered by the thick leafage of the overshadowing woods.—*Brooklyn Eagle.*

An Old Forester.

The Brantford *Courier* says :—"The present alarm which is being manifested throughout the country with reference to the consequences likely to accrue upon the wholesale destruction of Forests, had its key note struck as far back as the sixteenth century by a Mr. Hamsen, who, in an "Historical description of the Island of Britain" devotes a curious chapter on Wood and Marshes, after referring to the general decay of the forests in the land he goes on to say : I would wish that I might liue no longer than to see foure things in this land reformed, that is : The want of displine in the church ; the couetous dealings of some of our merchants in the preferment of the commodities of other countries, and hindrance of owne the holding of fairs and markets vpon the sundaie to be abolish and refer to the wednesdaies ; and that euery man in whatsoever part of the champaine soil enoieth forty acres of lands, and vpwards, after that rate either by free deed, copie held or fee farme, might plant one acre of wood, or sowe the same in oke mast, hasell, beech, and sufficient provision be made that may be cherished and kept. Mr. Hamsen was evidently a philosophical old gentleman, for he ends his reflection thus : 'But I feare me that I should liue too long, and so long that I should be wearie of the world or the world of me."

Second Growth of Timber.

The *Northwestern Lumberman* says :—From a pamphlet by the board of trade, Bangor, Me., we learn that the value of the products turned out in 1882 from the wood-working establishments of that city, omitting ship-building and the furniture and carriage business, is placed at $3,552,425, or something over half of the value of the entire products of all the mills and factories of the city. It is also estimated that the amount of lumber cut on the Penobscos from 1816 to the close of 1882 was, in round figures, 4,843,000,000 feet, 1,277,000,000 of it being pine, 3,026,000,000 spruce, and the balance, 440,000,000, hemlock and other woods. Notwithstanding this drain on tho timber tributary to the river the compiler of the report says :

The trade in lumber, which in the past has been the leading industry and the chief source of income to the inhabitants, is still in the flourishing condition, and the timber supply shows no sign of exhaustion. The quantity now standing is likely to last for generations to come, and meanwhile new forests are springing up and growing with marvellous rapidity. It is said by competent judges that there is more standing timber in Hancock county to-day than 20 years ago, and the same may be truthfully said of other sections of the state. Furthermore the system of cutting only the larger trees and carefully protecting the remainder prevails in northern Maine, and allows the forests to be profitable work over at state intervals, thus insuring their permanence. It is true the immense pine logs of former years are no longer seen floating down our rivers to the mills, but the numberless new and important uses which have been found for the smaller and cheaper woods, all of which are of rapid growth, have more than supplied the deficiency caused by the diminished size of the pine and spruce.

Their Value Appreciated.

The *Northwestern Lumberman* says :—"A treeless country is never a pleasant one, and no one fully appreciates the value of trees until he is once set down where they do not grow. Many of the people who have settled in Dakota complain more about the absence of timber than all other disadvantages combined. One gentleman in a letter say : "A tree, next to the faces of my best friends, is what I long to see most." This gentleman migrated from Wisconsin, and used the think, he says, that his native state was so productive of trees that they were a nuisance, but now he believes he would prefer a home "in the woods" rather than on the treeless plains of Dakota. The fact that for miles and miles there is not a tree for fuel, shade or wind-break renders a man who is used to seeing, and being benefited by trees, a little lonesome up there."

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

If you would escape the ravages of that scourge of the summer season, Cholera Morbus, keep Dr. Fowler's Extract of Wild Strawberry at hand for use. In that and all other forms of Bowel Complaint it is infallible.

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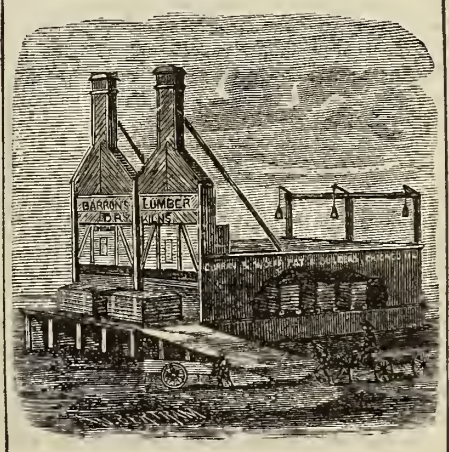

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., SEPT. 15, 1883.

LARGE shipments of telegraph poles are being made from Duluth westward for the Northern Pacific roads.

THE Winnipeg *Commercial* says that a Forestry and Horticultural Society has been organized in Winnipeg.

AN application for letters patent has been made by the Pigeon River Log Driving Association and Improvement Company.

THE electric light was started in connection with Mr. Booth's saw mill at Ottawa on the evening of August 27th. The test was satisfactory. There were in all twenty lamps.

A MICHIGAN farmer of Northfield recently sold for $5,000 clean money, 100 black walnut trees from his 120 acres of land. The Saginaw *Courier* says that they will "scale a total of 9,000 cubic feet,' and are to be shipped to Europe by way of Quebec.

THE *Dominion Mechanical and Milling News* says:—The history of wood-working machinery, as we understand that term, dates back a little over one hundred years, and England has the credit of being its birthplace. Daniel Bentham, Inspector General of the Naval Works, in 1779, invented the first machine for planing wood.

Ingoldsby says:—

"There are three social duties, the whole of the swarm
In this great human hive of ours ought to perform,
And that, too, as soon as conveniently may be:
The first of the three is the planting a Tree,
The next the producing a Book—then a Baby."

ABOUT the end of last month the lumbermen at Duluth were fervently supplicating for rain to bring down the hung up logs on the St. Louis & Nemadji. It was said that twenty-four hours of steady rain would bring down as many as 35,000,000 feet into the Fond du Lac boom, and also a large number down the Nemadji. Duncan, Gauble & Co. were making a determined effort to get some of their logs over the Dalles by a process of flooding, with some success.

OWNERS of steamers running between Stillwater, Minn., and Taylor's Falls have begun action against the St. Croix Boom Corporation for damages for interrupting navigation during a log jam that lasted several weeks. They claim several thousands of dollars.

THE Winnipeg *Commercial* says that Messrs. Walkley, Burrows & Bradley, who recently sold out their interest in the Northwest Lumbering Company, have been succeeded in the directorate by Messrs. Renwick, Boxer and J. B. McArthur. Mr. McArthur has been elected vice-president, and Mr. F. H. Cameron, sec-treasurer.

THE Ottawa *Free Press* of September 6th says:—There are seventy barges lying at the Chaudiere docks awaiting loads. This is a good indication of the unusual dullness in the lumber market. There is a large stock on hand, and very few sales made. Quotations keep the same. The output of logs in the limits next season will be full twenty per cent less than last winter. Wages are decreasing.

MESSRS. W. C. Edwards & Co. of Rockland (on the Lower Ottawa), who have hitherto confined their milling operations to the manufacture of boards and deals, have decided to commence the manufacture of shingles in their new mill. This branch of their business will, it is estimated, give employment to about 100 hands. The firm at present employs about 400 hands at Rockland.

THE Winnipeg *Times* says:—The news comes from Milwaukee that suit has been begun by the Milwaukee road against the Omaha, involving some 200,000 acres of valuable pine land in Douglas county, Wis., besides other properties and franchises. The matter grows out of an arrangement made last year between the two roads regarding the contest over the old St. Croix land grant to the Chicago, Superior & Pacific Air line.

ON Ottawa despatch of Sept. 10th says that Mr. David Moore has sold his square timber for 36 cents per foot. It was a splendid average. The price is somewhat lower than last year's quotations. Lumbermen generally complain of an unusual dulness in the timber market. Already large gangs of raftsmen are leaving daily for the shanties on the Ottawa and its tributaries. Operations will be greatly curtailed this season, and it is thought that the cut will be reduced 25 per cent.

ON THE MIDLAND R. R.

ON that portion of the Midland Railway known as the Coboconk branch a large business is being done by Messrs. McKenzie Brothers and Campbell, of Kirkfield, in telegraph poles. Their shipment this season will foot up about 30,000 poles, all of which has been sold to the Western Union Telegraph Company, delivered at various points in the States. As the guage on the Coboconk branch had not been widened, all these poles had to be transhiped at Lorneville Junction, which added unnecessarily to the cost of transporting them to their destination. The Coboconk branch has now been widened to the same guage as the rest of the line. There has also been a quantity of cedar taken from this section for the harbor works at Toronto.

There was a movement on foot some time ago at Orillia to have a canal dug between Lakes St. John and Couchiching at the portage, so as to enable Messrs. R. & G. Strickland who have bought Thompson, Smith & Son's mill at Bradford, and who own large limits on waters whose outlet is by way of Lake St. John, to move the Bradford mill to Orillia, and manufacture their lumber there instead of at some other point, but a survey revealed the fact that at the average height of these lakes, Lake St. John is the lowest and as a consequence the project has had to be abandoned.

At Foxmeade is to be found about the only log railway in Ontario. It is the property of Mr. James Maddon and runs from his mill a distance of about two miles into the bush. This mill has been chiefly engaged clearing some limits for the British Canadian Lumber Co., but after this season it will cut from a limit owned by the proprietor.

From Coldwater a branch of about nine miles has been built by the Midland to reach the Medonte Lumber Co.'s mill. The Medonte Company have been at work about four seasons, but as yet have shipped none of their stock, which amounts to between four and five million feet. They are in a section where there is a large quantity of fine grey oak.

The North River Lumber Company have erected a new mill at Fesserton. They have a contract with the British Canadian Company to clear certain lands for them. The B. C. Co. guarentees them 4,000,000 a year for six years. The cut to vary according to the times. Bushy & Wood have also erected a mill here, having a capacity of about a million and half and have some good limits to stock it from.

Mr. R. Power, of Victoria Harbor, has entered into partnership with Mr. Misscampbell, formerly manager for the British Canadian Co.—the firm to be known as R. Power & Co., and Mr. Misscampbell is to take the management of the business. This year's stock will be about ten million feet of lumber and twenty million shingles, which latter have been purchased by Messrs. Christie, Kerr & Co., of Toronto. This is about the largest individual stock of shingles in this section of the country. The season has been a bad one for towing, and this firm lost their first tow, owing to the stormy weather.

Business at Midland City seems to be very good. Two vessels cleared last week with lumber, one for Amherstburg and the other for Courtwright. The cut of the B. C. L. Co. this year was expected to be about 30,000,000 at their two mills, but the destruction of one of their mills by fire will prevent this anticipation being realized. Rathbun & Son, of Deseronto, are operating here too. Their inspector Mr. McCallum, is here shipping ties which have been delivered from various points on the Bay. They will ship about 30,000 ties and 10,000 posts from here this season. The lumber for the elevator at Fort William has been shipped from here by the propeller Argylo. It was brought here from Waubanshene and dressed by Mr. Garnet at his planing mill before being shipped. Mr. Garnet is very busy, having quite as much work as he can attend to, and therefore does not think he shall have any reason to complain of having located at this point.

The general feeling seems to be that the out get of logs next season will not be so large as it has been during the last two seasons.

TREE PLANTING AND PRESERVATION.

Mr. Phipps is sending out the following circular, and would be glad if any of our readers could send him information, so as to further his work in a matter of so great public importance:

SIR,—Having been instructed by the Ontario Government to make certain inquiries relative to the desirability of tree planting and forest preservation, I should be much obliged if you would send me word if any plantations of forest trees have been established in your neighborhood, whether only a few trees or many, as even the experiment of a solitary tree is valuable. Also, if you happen to know or can readily ascertain, when such were planted, what varieties have been found to thrive best, and on what soils, and what method of planting has been used. I may be passing your way, and would be glad to see and inquire personally into any improvements of the sort; but circumstances may forbid this, and a line from you would be valuable in the meantime. At the same time, I would gladly know whether, in your neighborhood, any change in rainfall, or drying up of creeks or rivers, seems to have followed the clearing of the forest. An early answer will greatly assist.

Yours truly,
R. W. PHIPPS,
Clerk of Preservation of Forests, Ontario.
233 Richmond Street west, Toronto,
Sept. 3rd, 1883

THE EFFECTS OF LIGHTNING ON TREES.

Our Geneva correspondent writes:—"The frequency of thunder storms in Switzerland this summer (we have on an average two a week) has afforded Prof. Colladon, of Geneva, a great authority on electricity and meteorology, ample opportunity of continuing his observations on the effect of lightning on trees and vegetation generally. He has ascertained that when lightning strikes a tree it leaves very few marks of its passage on the upper part and middle of the trunk, a peculiarity which he ascribes to the fact of those parts being more impregnated with sugar, a good conductor, than the lower part. As the electric fluid descends to the neighborhood of the heavier branches, where there is less saccharine matter, it tears open the bark and in many instances shivers the tree. It is no uncommon thing to find the lower part of a tree literally cut by the lightning, while the upper portion and the higher branches seem to have suffered hardly at all. Oaks, however, would appear to present an exception to this rule, or they are often found with tops quite blasted and the passage of the lightning lower down marked by a gouge-like furrow. These furrows sometimes go completely around the tree like a screw, the reason of which, says Prof. Colladon, is that the lightning follows the cells of which the bark is composed lengthwise, and in certain sorts of wood these cells are disposed spirally. A curious effect of lightning on vines is that it invariably strikes a great many vine stocks at the same time over a space, for the most part circular, from 8 metres to 25 metres in diameter, and containing, therefore, several hundred vines. Thd plants most effected are those in the centre of the circle, and the number of burned and yellowed leaves diminished in proportion to their distance from that point. In July two vineyards in this canton were struck by lightning, and the first idea of their proprietors, on seeing their shrivelled vines, was that a still more dreaded foe, phylloxera, had been at work, but when the Professor was called in he speedily enlightened them as to the cause of the mischief, and, in proof of his diagnosis, pointed out that the ground in the centre of the circle was strewn with torn leaves and freshly broken twigs."—*London (England) Times.*

CANADA WHITE PINE.

Dr. Bell, Assistant Director of the Geological Survey of Canada, says respecting the white pine: "This and the next species have so nearly the same limit throughout the greater part of their northward range, that they are represented on the map both by one line. The red pine, however, does not extend so far east as the white, so that in this direction the line represents only the boundary of the latter. Contrary to popular belief, the white pine is confined to a comparatively small part of the dominion, as will be observed by an inspection of the map. Its northern limit in Canada extends east as far as Mingan, while to the west it does not reach Lake Winnipeg, or Red River. It reaches its lowest latitude opposite to Ottawa City, about 48½°, and its highest about 52°, in the Lonely Lake Region. It occurs in favorable situations throughout the greater part of Newfoundland, but it is of best quality and most abundant along the Cander and Exploit rivers on the north, and the Humber on the west side of the island. On the last named stream, I have cut into the centres of several good sized trees, and found the wood of excellent quality. In the country immediately north of Lake St. John, the Messrs. Price have cut large quantities of fine white pine timber for export. When coming from Lake Mistassini to Ottawa, by way of the Gatinean river, Mr. Richardson, of the Geological Survey, first met this species at 230 miles north of that city. It occurs of fair size on the head waters of all the principal branches of the Moose River, and in former times is said to have extended considerably further north along these streams: but having been entirely destroyed by extensive forest fires, it has been replaced by other trees. Owing to these fires it is now very scarce in most of the region north of Lake Superior, but small groves of it have been observed as far north as represented."

RAFTS ON THE OTTAWA.

The Ottawa *Free Press* of Sept. 10th, says: The lumber trade is the staple industry of Ottawa, and consequently the citizens take a deep interest in the same, as anything injuriously affecting the business would prove hurtful to

tbe community. The market during the present season has been rather quiet, lumbermen holding back for better prices while purchasers have been waiting until later on in the fall before buying. As a consequence the shipment of lumber so far has been very small when compared with past years. This fact can easily be seen when it is noticed that the lumbermen in this district have considerable difficulty in finding piling ground for their output. Some mill-owners are engaged in taking their lumber some distance down the Ottawa on barges and piling it there. The expenses of handling the lumber so often before shipment must be quite an item, but this season it is observed that Messrs. Bronson & Weston bave introduced a rather simple, but, nevertheless, excellent and cheap plan for saving labor while engaged in this work. The lumber is placed on the barges in lots or tiers consisting of quite a number of pieces, and is trans-hipped with a crane at the wharf, afterwards being placed on lorries and run back on rails to the piling ground. This system saves the lumber being handled piece by piece, and the expense of paying for labor in performing tbis work is greatly lessened when compared with the old system. The other day a *Free Press* representative had a conversation with Mr. B. Grier, of the firm of J. & B. Grier, Lachine, who was in the city looking after one of his rafts which arrived from the Kippewa. The reporter and Mr. Grier visited the raft togetber and found that the timber, which consisted of square and waney, was of excellent quality. Indeed for size, straigbtness and appearance it can be said with all truth that tbe ratt was the best down the Ottawa this season. Some of the pieces of timber contained no less than 200 feet, and it took some trouble before Mr. Grier and the reporter could find a piece with a bend in it, which of course detracts from the value of timber. The quality of the Kippewa timber excels that of Michigan, and is almost as good as that of the St. Lawrence. To give the uninitiated an idea of the time it takes to bring a raft from Kippewa it may be stated that the one in question left in April, when navigation opened, thus taking upwards of four months to reach Ottawa.

Speaking of the outlook of the timber market Mr. Grier stated that wbile it was comparatively dull during the season, still prices were fair and the outlook was tbat in a very short time, as purchasers were not supplied, and as lumbermen were holding on to their output, the market would be good and a good figure the result. A splendid raft that was alongside of the Messrs. Grier's, and belonged to Mr. Latour was also visited, and the timber, too, was of good quality, although not nearly so heavy as the first mentioned. This one also, which consisted of square timber, came from the Kippewa. While referring to the lumber trade in the Ottawa district it might be interesting to give some statistics in regard to the trade generally. There are engaged in the getting out and manufacture of lumber in Canada about 100,000 men, who support families forming a grand total of half a million, or about one-ninth the population of the Dominion. In all the industrial establishments of Canada, $165,000,000 of capital is invested ; in saw mills and machinery over $25,000,000, is placed. The amount invested in lands and lumbering outfits is about $50,000,000 in all, or more than one-third the amount invested in all other industrial establishments. The total product of lumber in 1881 was $38,541,752, or nine dollars for each inhabitant of the country, of which enough was sold to bring into the country $23,991,052. As a revenue paying class the lumbermen take a high place, the half million persons who are supported by this industry paying five millions of dollars into the revenue of the country.

The lumber trade is far from being on the decrease and forms to-day, next to agriculture, the most important industry of our people.

THE WINNIPEG TRADE.

The Winnipeg *Times* has been publishing a series of interviews with business men from which we take the following :—Mr. James Sutherland said that business during the summer had been good, although there had been a considerable fall in prices. This decline commenced in the spring and continued until it represented a fall of about twenty-five per cent. ; but he thinks that prices have now touched bottom, and expects a rise in the fall. There has been a very fair demand for lumber all summer, but on the other hand there has been a greater competition, owing to the overflow of trade from Minnesota and from the Georgian Bay district, in both of which business has been somewhat dull. The opinion is, however, that the Minneapolis and Georgian Bay dealers are now pretty well out of the trade, finding that they cannot bring in lumber and make a profit at the prices at which the home manufacturers are able to sell. Altogether the sales have been nearly as large as last year. There is a prospect of a very fair fall trade. Messrs. S. R. Sutherland & Co. will have a large stock of dry lumber, something which the manufacturers have never been able to supply before. Heretofore the quantity of lumber sawn has always been so small that the manufacturers have been able to sell it almost direct from the saw. This year Messrs. Sutherland will go into the winter with ten million feet on hand, of white pine floated down the Red River from Minnesota. Mr. Sutherland believes that the bome manufacturers will now be able to supply all the wants of the country. Payments are being made fairly net.

SAW MILL IDEAS.

In some mills the driving pulley is so farf rom the husk that the belt is nearly horizontal. This will be the case where there are very long belts coming from below, or where the husk is not upon the floor above the engine or the counter shaft. In such cases the highly desirable arbor belt gig cannot be used ; but the same arrangement of the rag shaft and the pulley shaft, and the frictions can be used, the gig friction shaft having an extension with a bearing on the pulley outside the husk, and the cross belt making the connection with the engine or the counter shaft. As this cross belt extends beyond the arbor and will be so long as to be more durable than cross belts generally are, this independent gig may be driven either by belts direct from the engine on the same level, or from a counter shaft above . The belt should be as long as possible, to relieve the cross belt from excessive friction and wear ; and in tbis case it will gig as promptly and saw as fast as though the direct arbor belt gig were employed.

Although the cross belts have more wrap and hence more driving power than open ones, it is best to avoid them where it is possible. If the land be dry; there may be a pit dug about 6 ft. deep, and then the arbor belt gig can be applied. Depth of pit may be saved by raising the track about 4 feet, and drawing the sawdust away from the pit to the boiler by an endless cbain or rubber belt conveyor. It is best to have the logs taken from ground a few feet higher than at the mill, then there will be no power needed to draw the logs in. In those cases where the ground is level, the log may be drawn in by a light rope or chain, with spool and friction wheels.

In order to have the engine and boiler out of the way of the logs, they may be at the rear of the carriage ; a counter shaft passing under the track, in the pit, to belt to the arbor. Where there is a pit the front side of the carriage is open, so that the lumber need not to be carried a long way to the edgers, slab-cutters, lath machines, etc., these being right near.

The advantages of the double saw need not be here rehearsed. There are cases where single mills have no provision for altering to double, by attaching the frame of an upper saw to the husk. In this case the top saw may be hung from an inverted hanger ; the arbor beam being raised and lowered by screws, and held to the hangers by large turned bolts, wide apart. The upper arbor may be driven either from the lower one, or by a belt coming through the floor from the counter shaft below.—*Mechanical and Milling News.*

MAKING CIGAR BOXES.

The *Canadian Manufacturer* in a description of the industries of Galt says :—A little room breathing the incense of natural woods and occupied by a courteous gentleman, is the office of Wm. Beck & Co., who are engaged in making cigar boxes from domestic and imported woods, Canadian elm, and Spanish and Mexican cedar. The machinery used consists of small saws, planers and an exact machine that nails the scented boards together. The boxes are made to order, and the sizes are greatly diversified. Then they make whole and half-boxes, or those holding 100 and 50 cigars respectively. Twenty employees make 900 boxes each day. Upstairs, in a cheery, bright room, six girls were finishing and decorating the boxes with strips of paper, trade marks and vignettes. The girls were tastefully dressed and looked so happy that we asked them if they enjoyed their work. They assured us that they did enjoy it ; that it was not from necessity that they were engaged in it, as their parents are comfortable people owning their own homes. But the girls are proud to earn their independent pocket money, from which fund they draw for dainty dresses, fees to instructors of music, drawing, and the purchaso of books and pictures. Here is the beginning of the disappearance of the clinging vine idea about these young women, refreshing as a breeze from the ocean on a hot day. It speaks of a healthy moral vigor and a sturdy spirit of self helpfulness amongst these young people that insures the strength that is the pride of any country.

Peterborough, Ont.

The lumbering season has commenced. Messrs. Ul'yott & Sadler sent a number of men north to their limits last week, and a further force on Friday. Their timber limits are in the townships of Burleigh and Anstruther, Peterborough County, and Anson, Victoria County. The first week in September is about the usual time the work in the woods is commenced. It is expected that the total cut this year will be smaller than last year. It will probab'y not amount to over two-thirds of last year's cut. Mr. Irwin has also sent men north to his limits.

THE people of Brooklyn, Conn., deem their old oak the most beautiful tree in New England. A hundred years ago its top was cut off to use in bushing in hay seed, and the young tree then put off many branches near the ground. Some of these have grown to a length of 50 feet, and are very large. The trunk is 15½ feet in circumference.

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THE FORESTS AND THEIR MANAGEMENT.

We take the following from Mr. R. W. Phipps' report to the Ontario Government:

SILVER FIR AND SPRUCE IN THE BLACK FOREST.

The Black Forest mountains are the home of the silver fir. The winters are severe—five to eight feet of snow on the hills from November till April; three feet in the valley from December till March. They are partly regulated forest, in which, however, a gradual felling for their reproduction is carried on over one-third or one-fourth of the whole area at once, from which every year during thirty or forty years the largest trees are removed, while the rest are allowed to grow larger during the remaining years. This is done, as the price these large trees fetch is much higher in proportion than that of the smaller ones, and all are felled and removed in one piece if possible. Natural reproduction is chiefly resorted to in these forests, which, in consequence of the young plant growing well in the shade of the old trees, is very easily accomplished, even though it is extended over such a long period as thirty or forty years. To be able to keep as many trees as possible growing on the lands on which the regeneration of the forest is going on, the branches up to one or two-thirds of the height of the tree are sawn off to admit air and light to the young plants below, which does no harm to the silver fir, but, on the contrary, is said to aid the more rapid increase of the trunk, while the branches are used for litter. This sawing off of the branches is commenced from above by men who earn about forty-five cents a day. Regular seed-bearing seasons occur at longer or shorter intervals, but nearly every year there is sufficient seed to increase the number of young plants where it is wanted, Moss cover is very favorable for the germination of the seed, whilst in such places as get covered with grass or weeds, or where for other reasons the seed does not germinate freely, the soil is at once prepared, by clearing and slightly loosening it in strips and patches for the reception of the seed, the germination of which is thus facilitated. If the open space in the forest is so large that the seed from the old trees does not reach the whole of it, sowing by hand is resorted to early, so as to let the young plants be as nearly as possible of the same age. If, by the time the old trees are nearly all removed, there are still some parts not covered with young trees, planting is resorted to. For the better growth of such planted trees the existing groups are somewhat rounded off, to avoid the young trees planted having to struggle with the others, perhaps already twenty to thirty years old; and where, on incompletely stocked spaces, which have to be filled up by planting, there are single trees of some twenty or thirty years, they are cut down altogether; or, if they are standing in numbers, and are not quite so large, some of the lower branches are lopped off the outer ones, so as not to interfere with those planted. These plants are either taken from nurseries or out of the forest, if the latter have not grown in too deep shade, which would render them liable to suffer on being removed to open places.

The seed is collected with some risk from the trees in October, before the cones open and it falls out. As the seeds are very oily, they are best kept in the cones or sown at once. The sowing is done in prepared beds in rows four inches apart, and after germination the ground is covered with moss to keep in the moisture. The seedlings one year old are transplanted into rows six or seven inches apart, and three inches between the plants in the rows, after which the soil between them is covered with moss. Here they remain for two or three years before they are fit for transplanting. Shade from the side is very beneficial for the seed beds as well as for the nursery. Plants from the nursery are preferable to those out of the forest; and the latter, when used, are as a rule removed with some of the soil adhering to the roots. Planting is better done in spring than in autumn, and in the usual way, the roots of the young plants being cut as may be necessary. They have to be sheltered as far as possible against sun, dryness, or spring frosts, and the plants as a rule thrive better on the cool northerly and easterly slopes of the mountains than anywhere else. The silver fir grows very slowly at first, and does not get much higher than six inches in the first four or five years. At the age of twenty-five years it begins to grow very fast, and increases most between the ages of eighty and a hundred and twenty years. It likes best a deep, cool, moist and loamy soil with a covering of moss, and sends its roots deeper than the spruce, in consequence of which it suffers less from wind and storm than the latter. There are many spruce intermixed, used when natural reproduction of the silver fir fails. Thinnings are necessary in the thirtieth year, and have then to be repeated every tenth year, till the gradual felling of the largest trees commences. These fellings are regulated by the needs of the young seedlings, and are carried out only sufficiently to admit light to the young plants, leaving as many of the old trees to stand as can be permitted.

Moorpan.—In Hanover and elsewhere, where the Government are breaking up thousands of acres of heath for the purpose of planting forests, great difficulty is found in penetrating and converting into good soil a hard layer called "moorpan." This is broken by plough and pick-axe, and Scotch firs planted, whose deep tap-root passes down into the layer of better soil below. The Government pay about $11 an acre for the land.

ITALY.

Soon after the present Kingdom of Italy was established, a central forest school was organized near Florence, under the direction of A. di Berenger, formerly in the Austrian forest service of Venezia, and author of an excellent work on the history of forest management in Italy. The school is located in the splendid silver fir forest of Vallombrosa. We all remember

"Thick as autumnal leaves that strew the brooks,
In Vallombrosa,"

This is below the crest of the Appenines, on their western slope, about twenty miles east of Florence. In winter it is transferred to a lower station at Paterno, in the region of the olive. Italian forest literature of direct practical application is comparatively modern, but of late the publications of the Ministry of Agriculture, to which sylviculture is entrusted, contain much that is valuable. The two most important of these give the statistics of forests and the forest law of Italy. There are over five million acres of communal forests, over six million of private forests, and only half a million acres of State forests. One-fifth of the land is in forest. This is scant enough, apparently, or the nominal forests have been culled to depreciation, for we are told that—

"Projects of a general forest law for the whole of Italy have been repeatedly submitted to the Italian Parliament. The evil effects of denudation have been severely felt in many parts of the country, and the aim of these proposed legislative enactments has hitherto been to guard against further mischief by determining beforehand which lands shall, in the public interest, be clothed with forest or kept under forest, and then to place the whole of these lands under the supervision or control of the public forest officers without distinction, whether they belonged to state, village, commune, or private persons. From a report with which the Minister of Agriculture submitted the project of a general forest law in 1870, it appears that the financial exigencies of the country had rendered imperative the alienation of the greater part of the forests at the disposal of the State, and that it was only intended to retain a limited area of state forests, mainly with the view of supplying the timber required by the navy, and the forests required for this purpose the bill proposed to declare inalienable.

"Thus, with regard to forest matters," says Captain Walker, "it seems probable that Italy will pursue a policy different from that which has of late years been initiated in most provinces of India. In those provinces we acknowledge the necessity of maintaining certain areas under forest, or of clothing them with forest when they are bare; but we do not expect any satisfactory success in those attempts, unless the forests to be thus maintained or created are under the entire control of the State, and we entertain no serious hopes of effecting any real good by the supervision of private forests, or by any general kind of control over communal forests, unless the administration or management of such communal forests can be vested entirely in the hands of the public forest officers.

"In those provinces, therefore, of the Indian Empire, to which I now refer, our principal aim is, in the first place to consolidate the State forests wherever the State has suitable forest lands at its disposal; and we hope that eventually, when the majority of public forest officers shall have acquired that professional knowledge, skill, and experience which is necessary for a satisfactory management of forest land, that they may be found competent not only to manage the state forests intrusted to their charge, but also to induce large landed proprietors to follow their example in the management of their own estates, and, if such should ever be found necessary and expedient, to exercise an efficient supervision over private and communal forest lands; but we think that any attempt to exercise supervision and control over private and communal forest lands through the agency of forest officers who have not actually charge of public forests entirely under their own control, and who cannot point to the management of their own forests as an example to be followed in the management of the private or communal forests, would lead to unsatisfactory results. The further development of the general forest policy in Italy will doubtless be followed with great interest by Indian foresters, and on this account it appeared to me right to add the present remarks."

It may be valuable here to notice that in this, as in other points, the practical ideas of the Indian commissioner might well be applied in Canada. There is good reason to fear over-denudation here; there is also reason to believe that we shall have an interval in which to take measures for avoiding the evil. In that interval the course stated by the commissioner as likely to be followed in India might, it appears to me, profitably be pursued here, namely, the taking in hand by Government of any amount of forest fit for the purpose, and which could be spared from the operation of the system at present pursued, and preserving them on the European plan. This will further on be more fully treated.

(To be Continued.)

TIMBER AND DEALS IN GREAT BRITAIN.

Reports from the principal timber markets of Great Britain up to the 20th Aug., show a slightly improved tendency in prices. At the Baltic sale rooms in London on the 15th a parcel of pine sold well, the wide stuff bringing £26 15s., a better price than has been obtained for weeks. But wide stuff has been and still is scarce, and this price is out of proportion to regulars, which sold at under £22, while 9 inch went under £18. The reserve price for waney board was under £5. Quebec spruce, ex Electric, sold at £8 for regulars, "a non-paying price."

At Liverpool, a large fleet of vessels arrived during the week ending the 18th of August, including a considerable part of the Quebec spring fleet, and a number of spruce deal-laden vessels from the lower ports, which temporarily weakened the market for spruce deals. The timber trade, like other kinds of business was dull at that point, but an inquiry sent out for the Mersey docks and Harbor Board, for about 100,000 cubic feet of timber, of various descriptions, principally pitch pine, infused a little animation. At a sale of Alfred Dobell & Co. on the 10th, Dalhousie spruce deals, 3x11, 9 to 24 ft. brought $7 7s. 6d.; 3x9 brought £7 2s. 6d. and 2x6 brought £6 12s. 6d.

On the Tyne, trade continued very good up to 16th, and prices for all wood goods were firm. At Sundorland, imports were light, the Baltic oak trade fairly brisk. At Cardiff, the iron-workers' strike being over, the week was the busiest in timber for a long time, arrivals being numerous from Canada, Florida, the Baltic and the White Sea.

Arrivals of Quebec timber to Clyde ports were heavy during the week, over 11,000 tons being reported. Messrs. Edmiston & Mitchells held a sale on the 15th; there were offered parcels of States black walnut and Quebec birch, ash, and pine timber, and a few lots of deals, when shipbuilders were well represented and the following sales by auction were made: States black walnut, a parcel of 33 logs, averaging square (string measure) about 18 in., sold at 4s. to 6s. 3d., averaging 5s. 0½d. per cubic foot; Quebec birch, 14 in. to 15in. average square, sold at 1s. 8d. per cubic foot.

The imports of hewn and sawn wood into the United Kingdom for the seven months ended with July last were 1,021,727 loads hewn and 1,718,583 loads sawn, as compared with 1,045,876 of hewn and 1,879,574 sawn in a like period of 1882. The total was thus 185,150 loads or six per cent less. London shows an increase, but other leading points a decrease from last year. The export of deals from St. John for these seven months was smaller than for any similar period since 1879, being 105,253,000 feet, as compared with 117,679,000 feet same time 1882 and 114,978,000 feet 1881. Shipments from that port to Scotland, Wales and Ireland were larger this year than last, but to Liverpool, Bristol and the continent they were decidedly lessened.—*Monetary Times.*

WIDE DIMENSION PINE.

The London *Timber Trades Journal* of Aug. 18, says:—The pine parcel, ex Eugenie, sold well, the wide stuff going at £26 15s., a value that has not been recorded in the public sales for a long while, and which cannot be other than satisfactory. Regulars, however, went under £22, which is not a whit better than similar descriptions have been realizing for some time past, and the 9 in. under £18 were also plain evidence that there was no actual improvement as yet in the market. That values of broad pine are so disproportionate to that of other dimensions is entirely due to its present scarcity, but with such an apparent demand the inquiry for board timber, in the ordinary course, may be expected to take an active turn. Dealers now are so accustomed to everything ready sawn that they are disinclined to press business in what we may term the raw material, as leading them into deep water.

It is one thing to pay a good price for an article ready to hand, but another thing altogether to buy the material in its rough state to convert to the sizes required. In the one, the question is merely that of what you pay and what you receive, the other has lots of things hanging to it that may leave a wrong balance unless closely watched. For those that have plenty of saw machinery under their own control we should think just now at the present price of pine timber a profitable trade could be done in manufacturing board pine into saleable sizes. The reserve price on waney board was under £5, which, with the cheap rates sawing is now done at, on paper leaves a wide margin for contingencies. Why the stuff is not converted on the other side it is not easy to conjecture; the quantity of best quality each log would supply is the problem which would first have to be solved, and possibly this might give a different colouring to the calculation altogether.

That wide dimensions are obtainable at other shipping ports of the St. Lawrence as well as Quebec we have plenty of evidence of by the quotations supplied in the journals at the timber localities of the United States, which now and again appear in a tabulated form. Not that alone, but the sizes of the logs shipped in the partly rough state to this side are also given. We doubt if the high prices now obtainable could be depended on were the market better supplied with wide deals, and it probably suits the mills to keep more to the regular sizes, even if they get proportionately less money for them.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

THERE is no excuse for suffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why suffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

Chips.

THE Paris Municipal Council have voted 480,000f. for the erection of wooden buildings in the bastions of the fortifications to serve as hospitals in view of an outbreak of cholera.

THE factory of John McGregor, at South Lincoln, Me., turns out from 30,000 to 40,000 gross of spools per month, and consumes annually from 2,000 to 3,000 cords of birch. Fifty hands are employed.

THE Quebec *Chronicle* of Aug. 31st says:—Messrs. John Sharples, Sons & Co. have purchased a raft of white pine from Mr. Barrett, of Renfrew, of about 45 feet average, at 19½ cents per foot.

Freyberg Bros., of Washington island, mouth of Green bay, Wis., recently lost 150,000 feet of pine logs, as they were being towed in raft from point Aux Bark to Washington island. A heavy sea broke up the raft.

G. W. Frost & Co., at Saco, Me., have a large new box factory, the bnilding being 80x125 feet on the ground. The consume 5,000,000 feet of pine a year in packing-boxes of all kinds. They employ 40 to 50 hands.

DURING July two vessels with lumber left Puget Sound mills for Honolulu, Sandwich Islands, two for Sydney, Australia, one for Callao, and one for Guaymas. The cargoes aggregated 4,500,000 feet, and a value of $60,000.

A PARTY of Wisconsin loggers recently put in an appearance at Olympia, W. T., and were dumbfoundered at the size of the fir and cedar of Puget Sound, as compared with the pine timber to which they were accustomed.

THE Minnedosa correspondent of the Winnipeg *Commercial* says:—Messrs. Sword & Moore, of Brandon, are bringing in a large stock of sash, doors and fine lumber, and have opened business in Barker's block on Tilson street.

THE Parcels Post, on the second day of its coming into operation, brought to the House of Commons a small tree addressed to Mr. Gladstone. In the absence of other explanation it is supposed that this was a joke, and had some reference to the right hon. gentleman's well known skill in the use of the axe.

THE Winnipeg *Commercial* of Aug. 28 says:—There has been a more active movement in lumber during the past ten days than for some time. Considerable building operations in the city, and also at different points out west. have caused quite a demand. The mills are busy and it will keep them fully employed to cut all the logs on hand between now and winter.

The Winnipeg *Times* says:—The sawmill at Fort Alexander has been rented to Mr. Schneider, of Winnipeg, who will run it for the remainder of the season. It is understood that Mr. Schneider intends erecting a first-class steam sawmill on Winnipeg River, a few miles above the Fort, this coming fall.

THE *Lumberman's Gazette* says:—Many people suppose the United States has the heaviest percentage of woodland of any country in the world and are inclined to treat all that may be said in reference to the destruction of our forests with utter indifference. But the fact is, we have only one fourth of our territory covered with wood, which is a smaller area relatively than eastern, western and northern Europe. Pine timber is being rapidly denuded and ere many years shall have passed into history, the southern states will be the only source of supply for pine lumber.

THE *Timber Trades Journal* says:—A list of 62 arrivals of timber laden vessels in London, in the seven days ending the 15th of August, is a pretty considerable contribution to the stocks on hand, but not so heavy an importation as some preceding weeks have shown. About a third of them are from Canadian ports, and we seem to be getting more than usual from the St. Lawrence shores. Steamers are less plentiful in the list than they have latterly been, two-thirds of the whole number being sailing vessels. We should judge from the features of this week's importation that the scale of supply is rather abating. The comparatively few steamers in this week's report suggests that they, or many of them, have found other employment which suits them better.

EVEN sawdust is being utilized in heretofore unheard of ways: Pine sawdust, highly compressed, has been successfully used to make up centre frames of carriage wheels. It is said to be so solid that it will bear a pressure equal to 33 tons per square inch. As sawdust has also been used for partitions and bricks, its application to the production of complex carvings and mouldings does not seem to be far off.

THE Winnipeg *Times* says:—A new departure in the lumber trade has been inaugurated by Mr. D. Ross, of Whitemouth, who intends to hold periodical auction sales in bulk of lumber at the mills, thus allowing the buyers to fix the current market of the stuff. From the known quality of the product of Mr. Ross' mills it will be a fair test of what good quality and grade of lumber is worth in open market. Mr. Wolf has been selected to wield the hammer on this important occasion.

THE *Northwestern Lumberman* says:—The statement made by our Ashland, Neb., correspondent that Tennessee poplar is being used in that state for finishing purposes is a significant one. It is one illustration of what this paper has claimed for some time, that the kinds of lumber used in the different sections will be more varied year after year. It was not long ago that white pine was about the only wood called for or expected to be had for building purposes in the Northwest. This was largely because the other woods were not well known.

PUGET SOUND.

The Lumber industry of Puget Sound, says the *Post-Intelligencer*, has reached a point of development which must command attention. There will be cut in Washington Territory during the present year 500,000,000 feet of lumber. This product is distributed, as nearly as can be estimated as follows:—

Export to California	250,000,000
Export to foreign ports	80,000,000
Home consumption	170,000,000

This vast product represents in round numbers a value on the wharves ready for shipment, or at local mills ready for delivery, of $12 per thousand, or an aggregate of $6,000,000, which is net revenue to the territory from this one industry. The 330,000,000 feet exported requires the service of a goodly number of vessels. Taking all classes of craft on which lumber is exported, the average cargo is about 500,000 feet, which would make necessary the shipment of 660 cargoes. Another and the most notable feature, one which more than others evidences the rapid settlement of the territory adjacent to Puget Sound, and the cities and villages situated thereon, is the item of home consumption. The lumber for export is mainly cut by seven large mills on the Sound. That for home consumption employs as many as 40 smaller ones, with a daily output of from 2,500 to 75,000 feet each, and an average of about 12,000 feet. These mills are constantly crowded with orders. Builders are forced to wait their turn, and there is no evidence of a falling off in the demand. The amount of improvement this large quantity of lumber represents in buildings of various classes, wharves, sidewalks, railway ties, etc., etc., is an evidence of prosperity conclusive and incontrovertible. Within the city limits of Seattle there is being cut at this writing an average of 160,000 feet per day, and within 30 days this capacity will be increased to 200,000 feet per day. All this lumber is used here, and the demand is still greatly in advance of the supply. The prospective magnitude of the lumber interest of northwestern Washington is as yet hardly realized. It is to be the most potent factor in the growth and production of permanent wealth to our people. From Puget Sound ten years hence the exports of lumber direct to foreign ports will exceed those of the balance of the Pacific coast. We shall ship to every known port, and the flags of every nation will be seen floating at mast head in our harbors. The interior will also demand attention and our home consumption should and will double every year. We shall be prepared and will furnish our brethren east of the Cascades and on the line of the Northern Pacific railroad, as far east as the demand may reach, houses made of the finest of pine, cedar and fir, framed, fitted and ready for immediate erection, put up in packages and shipped to destination for less money and of better class than they can be built upon the ground, saving freight, wastage and time to our eastern customers and creating for ourselves an industry of illimitable extent and undoubted stability.

COMPRESSING SAWDUST.

To the Editor of the Canada Lumberman.

DEAR SIR,—I was reading lately an article in your paper of the 1st Aug., about compressing sawdust into fuel. I have large mills here turning out about 250,000 sup. ft., per day, of spruce deals three inches in thickness, and, consequently, there is much sawdust. If you feel satisfied that the machine will work spruce sawdust, please hand this letter to the patentee. If he can fit it up at any reasonable price I would like him to communicate with me, as I would feel inclined to embark in the enterprise.

Yours truly,

J. B. SNOWBALL.

Chatham, Miramichi, N. B., Aug. 28, 1883.

The Port of Quebec.

From a comparative statement printed in a recent issue of the *Quebec Chronicle*, showing the number of sailing vessels and steamers entered inwards and outwards at the port of Quebec from the opening of navigation to June, 30th, 1882 and 1883, we find that 311 vessels arrived this year, against 239 vessels in same period of 1882, showing a good increase on 1883. Of this number there were this year 193 vessels under the British flag, and 223 arriving from the United Kingdom, against 150 and 176 vessels respectively last year. The outward vessels this years numbered 198, in total of which 121 were British, and 176 for this country, against 165 vessels, 115 Britissh, and 141 for the United Kingdom last year. This likewise shows an increase for the present year. Another statement gives the following return of vessels inwards and outwards for the fiscal years ending June 30th, 1882 and 1883:—Inwards, 1883, 682 vessels, British 447, steamers 152, sailing vessels 530, from United Kingdom 516. 1882, 642 vessels, steamers 148, sailers 494, British 412, from United Kingdom 499. Outwards, 1883, 653 vessels, steamers 111, sailers 542, British 417, to United Kingdom 550. 1882, 680 vessels, 146 steamers, 534 sailers, 460 British, and 568 to United Kingdom. As will be seen, there was an increase of forty vessels inward this year, but a decrease of twenty-seven leaving the port.

Looking for Timber.

The Winnipeg *Times* of Aug. 28 says:—Mr. Alex. McKay, of Ottawa, accompanied by a friend, a gentleman also belonging to that city, have returned to Winnipeg after quite a lengthy trip to Lake Winnipeg and vicinity.

In reply to a question by a TIMES representative one of the gentlemen said:

"We spent considerable time looking over the Lake Winnipeg and Bearings rivers district."

"With what result?"

"Well, we are satisfied that there is considerable spruce there. We were dissapointed in not seeing any pine. There is none of any size."

"What do you think of the Bearings River?"

"It is pretty rough and the rapids are numerous. I think, however, that there should be no trouble in driving logs on it."

"Have you a limit in the districts you visited?"

"Mr. McKay has a 50 mile limit at Bearings River. I have no interest."

"What will be the outcome of your trip?"

"That we cannot say as yet. The cost of handling the logs will be considerable, but all considered lumbering there may be made to pay."

W. A. EDGARS, of Frankville, was cured of Liver and Kidney Complaint after life was dispaired of. He had remained from ten to fifteen days without an action of the bowels. Burdock Blood Bitters cured him, and he writes that he is a better man than he has been for twenty years past.

Do not delay, if suffering any form of Bowel Complaint, however mild apparently may be the attack, but use Dr. Fowler's Extract of Wild Strawberry. It is the old reliable cure for all forms of Summer Complaint that require prompt treatment. Ask your druggist and all dealers in patent medicines.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,

W. H. DICKISON,

218 St. Constant St., Montreal.

To Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

READER, if you suffer from any disorder of the Liver, Stomach, Bowels, Kidneys, Skin or Blood, try Burdock Blood Bitters, Nature's specific medicine for acting on those organs for the outlet of disease. 25,000 bottles sold in the last three months.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w&d1121z22

Health is Wealth.

DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto

BAXTER'S MANDRAKE BITTERS

THE ONLY VEGETABLE CURE FOR DYSPEPSIA,

Loss of Appetite, Indigestion, Sour Stomach, Habitual Costiveness, Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

Burdock BLOOD BITTERS

Market Reports.

TORONTO.

From Our Own Correspondent.

SEPT. 10.—The retail trade in this city at the present time is fairly good ; on making inquiries at the various yards I received the same replies, —doing all we can conveniently handle, but keen competition leads to a cutting in prices to some extent. In bill stuff this cannot be done, unless the dealer is able to make it up on some other portions of the order. Mill men hold firm to former figures for all classes of dimension timber, and, as long as this is the case, prices cannot be cut unless the dealer makes it up on the coarser grades of boards and plank. There are no private tenders taken by builders from dealers in this city. The usual course adopted is something like the following : A builder enters the office of a dealer and opens out his list of stuff required for a building, or buildings, and modestly asks for figures for his bill delivered on the ground. After he has received this he proceeds to visit another dealer and obtains figures from him, if said figures are below those already obtained he at once travels on to another, but if above the first figures obtained he opens out the offer received from dealer No. 1 for the inspection of dealer No. 2, and in nine cases out of ten the latter is ready to come down a few dollars for the privilege of supplying the order ; the builder, however, is not quite ready to leave his order just at present, he has the offer made in writing and goes on his way quietly to visit dealer No. 3, and if the offer received there is not lower than the offer made by dealer No. 2, why, of course, he shows number No. 3 the tender made by No. 2, taking care to keep the offer made by No. 1 in his pocket, and in this way he will go the rounds of six or eight dealers and then take the lowest tender. I presume it is useless to point out through the journal how this suicidal policy on the part of dealers can be brought to an end. I have urged time and again, both by word of mouth and use of pen, the true remedy, but many dealers seem to consider that the bulk of business done by them is the only road to prosperity, ignoring entirely the plain fact that it would be much better to sell 1,000,000 feet of lumber and obtain a profit of $1,000 than to sell 2,000,000 and only make the same, and only half the risk by bad debts incurred, and if dealers cannot be made to see this why then to use a homely Scotch saying they must "gang their ain gait."

Shipments over our docks to American ports have somewhat improved, but most of that being sent forward is on consignment, direct sales being few and far between, although dealers affirm that returns so far made on consignments have been fully up to expectatious.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ⅌ M	3 00
Sawn Lath	3 00

MONTREAL.

From Our Own Correspondent

SEPT. 11.—Business for the past two weeks has been quiet, but stocks are sold assorted. Coarse lumber has been somewhat shaded in price this summer, but the price of a good article continues high, and it is in good demand. The enquiry for hardwood has been fair, for ash and cherry in particular. Laths are still held for our quotation. Prospects are that the output of logs this season will be considerably under that of last year. There appears to be an over-production of sawn lumber, as millers seem to manufacture as much lumber when the demand is light as when it is brisk, thus keeping the market overstocked, and for low prices they have only themselves to blame. Quotations ex yard are unchanged as under:

Pine, 1st quality, ⅌ M	$35 00@40 00
Pine, 2nd " ⅌ M	22 00@24 00
Pine, shipping culls, ⅌ M	14 00@16 00
Pine, 4th quality deals, ⅌ M	11 00@12 00
Pine, mill culls, ⅌ M	10 00@12 00
Spruce, ⅌ M	10 00@13 00
Hemlock, ⅌ M	9 00@10 00
Ash, run of log culls out, ⅌ M	20 00@25 00
Bass, " " ⅌ M	17 00@20 00
Oak, ⅌ M	40 00@50 00
Walnut ⅌ M	60 00 100 00
Cherry, ⅌ M	60 00@80 00
Butternut, ⅌ M	35 00@40 00
Birch, ⅌ M	20 00@25 00
Hard Maple, ⅌ M	25 00@30 00
Lath, ⅌ M	1 60@ 0 00
Shingles, 1st, ⅌ M	3 00@ 0 00
Shingles, 2nd, ⅌ M	2 50@ 0 00

CORDWOOD.

The late cold weather has helped to give an impetus to the demand, and although we do not alter quotations, for large lots they would probably be shaded. Imports are keeping pace with all requirements and the stocks on the wharves are pretty full. We quote prices ex cartage as follows :—

Long Maple	$ 7 50
Short "	6 50
Long Birch	7 00
Long Beech	6 00
Short "	5 00
Long Tamarack	6 00

WINNIPEG.

The Winnipeg *Commercial* of Sept. 4, says : There has been a better demand for lumber lately than for some time past, and business will likely be fairly good during the balance of the season. The mills are actively at work, and the cut between now and winter will be heavy. The supply will no doubt be largely in excess of the demand. Quotations are as follows, but they are by no means fixed :—Pine lumber, 1st, common boards dressed, $26.50 ; 2nd do. dressed, $25.50 ; 1st do. rough, $26.50 ; 2nd do. $25.50 ; sheathing, rough, $25 ; timber 16 feet and under, $24 ; do. over 16 feet, for each additional 2 feet, $1 ; dimension and joists 16 feet and under, $24 ; do. over 16 feet for each, $1 ; fencing, $25 ; 2 and 3 inch battens, $30 ; A stock boards, all widths, $50 ; B do $45 ; C do. $40 ; D. do. $35 ; 1st clear, 1, 1¼, 1½, and 2 inch, $60 ; 2nd do. $56 ; window and door casings, $50 ; base boards, dressed, $50 ; 1st pine flooring, siding and ceiling, $40 ; 2nd do. $35 ; 3rd do. $32 ; ½ inch split siding, dressed, $30. Spruce lumber—timber 16 feet and under, $23 ; do., over 16 feet for each additional 2 feet, $1 ; dimensions and joists, 16 feet and under, $23 ; do., over 16 feet for each additional 2 feet, $1; boards, $23 ; 1st flooring, siding and ceiling, $32 ; XX shingles, $5.50 ; Star A shingles, $5.50 ; X shingles, $5.50 ; A do. $5 ; lath $4.50.

ALBANY.

Quotatious at the yards are as follows :—

Pine, clear, ⅌ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	40 00@45 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 20
Pine, 10-in. boards, 16 ft., ⅌ M	30 00@35 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	17 00@18 00
Pine, 1-in. siding, select	42 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 21
Spruce, plank, 2-in., each	00 00@00 32
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 15
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 12
Ash, good, ⅌ M	40 00@43 00
Ash, second quality, ⅌ M	25 00@30 00
Cherry, good, ⅌ M	60 00@85 00
Cherry, common, ⅌ M	25 00@35 00
Oak, good, ⅌ M	40 00@43 00
Oak, second quality, ⅌ M	20 00@25 00
Basswood, ⅌ M	25 00@30 00
Hickory, ⅌ M	40 00@40 00
Maple, Canada, ⅌ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ⅌ M	35 00@40 00
Shingles, shaved, pine, ⅌ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 60
" cedar, mixed	0 00@ 3 60
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ⅌ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of Sept. 8th, says :— Eastern lumber is arriving moderately, with prices about as of late. Hemlock is rather quiet and easy. Spruce is moving well and steadily. Southern pine is in only limited request. Western pine is moving in a moderate way at about previous prices. As to hardwoods, there is quite a good trade in desirable grades of walnut, especially from the furniture manufacturers and prices are steady. Oak is having a a fair request. Cherry of good grades finds a good demand. Whitewood is in large supply and fair movement at low prices.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

OSWEGO, N. Y.

From Our Own Correspondent.

We cannot change quotations ; demand is very light ; prices are well maintained. Collections are fair and the trade is in a healthy condition. The new cut now arriving is in a much better condition owing to the dry weather through the month of August. Canal freights are $1,75 to Albany and $1.25 to New York.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

CHICAGO.

The *Northwestern Lumberman* of Sept. 8th, says :—There are indications clear and pronounced that lumber is beginning to move in larger volume than during the summer months. This increase is more noticeable in the prairie states than elsewhere. There is a decided change for the better in this city, both on the cargo market and at the yards. The interior begins to call for lumber more urgently. Yard dealers throughout the country have been going slow and cautiously all summer. In the majority of instances they have let their stocks run down. Everybody has been waiting to see the crop outcome. The average agricultural result has been good this year, and a large sale of lumber must be the consequence. The fact that assorted stocks are nowhere excessive, and in many yards are really short, points to a demand this fall that will be unusual. Buyers everywhere have laid in stocks cautiously this season. Reports from New England and New York mention the same conservative feature. The rising of a powerful demand would soon make the lack of stocks in the yards felt.

The number of cargo arrivals at this port for the week ending Wednesday was not quite as large as the week previous, it standing 218 this week to 260 last week. The wind was favorable during Saturday and over Sunday, so that on Saturday, Sunday and Mouday 120 vessels had put in an appearance. On Monday and Tuesday the market was crowded with loads, the wind continuing favorable, but it was noticeable that the fleet was rapidly thinned out, indicating greater activity than characterized the weeks before. The revival of demand at the yards was beginuing to be felt on the market, and it is safe to repeat that the week has been a fairly active one. Cargoes have been taken more quickly, with less preliminary talking, aud there has been less disagreement about prices. While values cannot be quoted higher, they are stiffer, and buyers have not questioned them as much as formerly. It may be said that the sag below quotations that has all along been noticed has been restored to a straight line. It is even claimed by some brokers that prices are a little higher, though they do not demand that quotations be raised.

Quotations are as follows :—

Short dimension, green	$ 9 00@ 9 50
Long dimension, green	10 00@11 00
Boards and strips—No. 2	10 50@12 50
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 10@ 2 20
Extra A	2 40@ 2 60
Lath	1 50@ 1 70

Receipts of lumber, shingles, etc., for the week ending Sept. 6. as reported by the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	Shingles.
1883	60,283,000	45,457,000
1882	62,021,000	23,624.000

FROM JANUARY 1, 1883, TO SEPTEMBER 6, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	1,139,632,000	776,2 9,000
1882	1,327,165,000	558,233,000
Increase		217,976,000
Decrease	187,533,000	

STOCK ON HAND AUG. 1.

	1883.	1882.	1881.
Lumber	510,799,847	511,903,574	422,404,156
Shingles	323,957 215	244,2 1,650	184,165,000
Lath	61,109,958	39,859,837	36,346,046
Pickets	1,8 2,911	1,717,165	2,777,053
Cedar posts	499,070	293,253	255,655

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of Aug. 25 says :— The prices of wood have as yet apparently made no upward movement, although there is an evident disposition on the part of those who hold stock to keep it out of the market rather than accept the low values now obtainable. Of course what turn the market will take during the dead season depends greatly on the shape the fall stocks will assume. If these, contrary to expectations, are of a heavy character, it is quite possible the recovery of values will be delayed till well into the following spring. On the other hand, should the closing shipments of the year be on a moderate scale, an advance in the market may be expected to speedily follow.

We had some years since begun to recognise the fact that the forest yield in timber producing countries was gradually lessening, and the trees themselves by becoming scarcer were intrinsically rising in value ; but, from whatever cause it may arise, we seem now to have an overplus of the commodity, and that too in the teeth of the greatly extended area of consumption which the magnified proportions of the trade have led up to. If this immense exhaustion is going on daily, surely prices might not unnaturally be supposed to feel its effects.

Several thousands of standards have been taken out of consumption this season by fires at the yards both in Sweden and Russia ; but this has had no appreciable influence on the market. So with the pine stocks here, which, though still confined to moderate proportions, have not helped prices to advance, because large quantities that stood over from last year are known to be available, and may come forward yet before the shipping season terminates. We have no faith in these rumours of heavy fall supplies, especially from the Quebec side, the rise in freights probably checking any tendency to ship heavily on speculation.

LIVERPOOL.

The *Timber Trades Journal* of Aug. 25, says : Apart from the order for about 100,000 cubic feet of timber from the Mersey Docks and Harbor Board, which is now in process of being delivered, there is also a good and steady demand from the country, induced, no doubt, by the low prices now ruling, especially for pitch pine and spruce deals. The latter have come forward far too freely for the wants of the market, and with the dull condition of trade in the manufacturing districts, there is no likelihood of any advance iu the present price, unless the shipments are materially curtailed.

Advices from St. John, N. B., state that several of the largest mill have shut down, and will remain so until prices on this side improve, and that the stocks held there have advanced nearly five shillings per standard. All this may be perfectly true, but at the same time this market is well supplied already, and there is a

good stock in the manufacturing districts in the hands of the consumers, who are therefore reluctant buyers at any price. On the other hand, it must be admitted that some cargoes are now being stored on account of the shippers, who have faith in the future, but whose hopes may not be fulfilled if imports continue to come forward as they have done recently.

On Friday last, the 17th August, Messrs. A. F. & D. Mackay offered one cargo each of St. John, N. B., Shediac, N. B., and Pictou, N. S., spruce deals, birch timber, &c., together with other woods. Although there was a good attendance of buyers, not only from the country but from the local trade, there was but little spirit of competition shown, and evidently a large portion of the audience were there as spectators only :—

The cargo of St. John, N. B., spruce deals sold as under :—

	£ s. d.		£ s. d.
16 to 26 ft. 3×11	7 7 6		
12 " 15 " 3×11	7 5 0		
9 " 11 " 3×11	7 2 6		
16 " 24 " 3×9	7 2 6	to 7	5 0
12 " 15 " 3×9	7 0 0		
9 " 11 " 3×9	6 17 6		
16 " 27 " 3×7	6 17 6		
12 " 15 " 3×7	6 15 0	" 6	17 6
9 " 11 " 3×7	6 17 6		
9 " 26 " 2½×7	7 2 6		
9 " 20 " 3×15 to 19	7 2 6		
9 " 23 " 3×14	7 2 6		
9 " 24 " 3×13	7 0 0		
9 " 26 " 3×10	6 17 6		
16 " 24 " 3×8	6 17 6	" 7	0 9
9 " 15 " 3×8	6 15 0		

The bidding for the cargo of Shediac was very slow, and apparently this class of goods was not wanted, about one-third of the cargo being withdrawn.

About 1,130 logs of Pictou birch were offered, but of these about 382 logs were withdrawn ; hese were all of the larger sizes, say 17 to 20 deep, but the remainder was sold 12 to 16½ in. at an average of about 16½d. per foot.

On Wednesday Messrs. James Smith & Co. sold by auction a cargo of Bathurst spruce, and pine deals, &c., and "to arrive" about fifty standards red pine deals.

HULL.

The *Timber Trades Journal* of Aug. 25, says : The import of wood goods into Hull during the past week is again a full average, amounting to 19,343 loads, of which the following are the particulars :—

Quebec.....3,699 lds		Kramfors....1,055 lds.	
Riga .....3,255 "		Soderhamn .. 955 "	
Cronstadt....2,186 "		Pensacola.... 767 "	
Uleaborg.... 1,710 "		Porsgrund... 644 "	
Wyborg.....1,452 "		Gothenburg.. 427 "	
Archangel ...1,323 "		Demerara.... 317 "	
Nyhamn.....1,190 "		Stettin ..... 229 "	

Other ports, 132 loads.

The Quebec goods are timely arrivals, and come to replenish a very bare market, for there are but few deals held here, and none in Grimsby, except it be a small cargo passing through for a Lincoln firm. Quebec goods are falling out of use on this coast, no doubt owing to their high price, a detail that must be attributed to their in some degree becoming a scarce article. The trade is very active here, the new arrivals and the old stocks having largely passed into consumption.

LEITH.

The *Timber Trades Journal* of Aug. 25, says : The import list for the past week is heavy for deals and battens, some large cargoes having arrived, amongst which may be noted two large shipments per steamer from Riga and Cronstadt, for Messrs. Ferguson, Davidson & Co.

On Tuesday last Messrs. A. Garland & Roger exposed for sale by public auction their spring shipment of American goods. The weather was everything that could be desired, and a large company turned out, including many well-known purchasers. At previous sales this summer buyers have held back, apparently laboring under the impression that, owing to the heavy spring importations of American stuffs to this port, prices will decline considerably. On Tuesday, however, there seemed to be a greater tendency to come forward, although the prices were not altogether satisfactory in some cases. A considerable portion of the waney yellow pine was sold at from 2s. 8½d. for the large timber down to 2s. 5½d. for the small. American walnut found a few buyers at 5s. per cubic foot, while birch went away pretty well, though, to be sure, the price was very low indeed. Yellow pine deals did not seem to be in great demand, only a few lots being sold. After the American goods had been exposed, the usual variety of deals and battens, flooring, etc., were offered, and a good few lots found purchasers. The following is a note of the principal prices realized :—

American birch	1s. 9d. to 2s.	per cub. ft.
Waney yellow pine	2s. 5½d. to 2s. 8½d.	"
Walnut	5s.	"
1st yellow pine deals	2s. 5d.	"
2nd " " "	2s.	"

GLASGOW.

The *Timber Trades Journal* of Aug. 25, says : During the past week the imports of wood goods to Clyde have been heavy—in all about 5,600 loads, chiefly log timber ; and at Grangemouth the arrivals, consisting principally of battens, amount to about the same quantity.

An auction sale of timber and deals was held at Greenock on 16th inst., and one here on 21st inst. At the former sale a large quantity of wood changed hands, there being a good attendance, and prices on the whole compare favorably with recent rates,

The sale here on the 21st inst. was pretty well attended, and a number of lots of deals were disposed of ; but a large proportion of catalogue was withdrawn, prices offered not being satisfactory to the broker.

On 16th inst., at Greenock, Messrs. Edmiston & Mitchells, brokers. The following are some of the sales :—

Quebec waney boardwood		Per cub. ft.
45 c. ft. av per log	2s. 3d.	"
Do square do.—		
52 c. ft. av. per log	2s. 2d.	"
Do. yellow pine.—		
40 to 50 c. ft. av. per log	1s. 5½d. to 1s. 7d.	"
Do. do. deck plank—		
70 c. ft. av. per log	2s. 2½d.	"
Quebec 3rd yellow pine deals—		
10 to 13 ft. 12/23×3	1s. 2½d.	"
12 " 16 " 11×3	1s. 0½d.	"

CARDIFF.

The *Timber Trades Journal* of Aug. 25 says :—We have not had this week such heavy arrivals as recorded in our last report. A cargo of pitch pine has come to hand from Mobile ; the first, so far as we can learn, imported here from that place. There have also arrived two steamer cargoes and a couple of sailing cargoes from the Baltic, and several Canadian shipments. There is, likewise, expected in a day or two a steamer from Finland, with about 700 standards, which will be the largest cargo ever brought to Cardiff in one bottom, and it will be interesting to see whether the despatch the dock authorities will be able to give will be such as to tempt owners to repeat the chartering for this place.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Aug. 31 :—

	1881.	1882.	1883.
Waney White Pine..	1,520,799	1,478,304	2,114,484
White Pine.....	4,402,360	5,975,135	4,433,559
Red Pine.....	1,204,134	1,000,713	327,112
Oak.....	2,065,167	846,051	1,273,741
Elm.....	925,045	495,891	302,412
Ash.....	333,210	200,393	211,677
Basswood	3,356	815	2,145
Butternut.....	1,393	2,228	989
Tamarac.....	22,614	4,835	4,990
Birch & Maple.....	139.873	262,417	137,249
Masts.....	—pcs	33 pcs	—pcs
Spars.....	— pcs	51 pcs	— pcs
Std. Staves.....	278.7 3.12	292.5.0.16	509.5.2.10
W. I. Staves.....	314.9.0.10	871.1.3.16	449.1.2.9
Brl. Staves.....	.....	21.9.3.26	87.1.1.27

JAMES PATTON,
Quebec, Aug. 31. Supervisor of Cullers.

SWEDEN.

Consul Drummond Hay, in his report on the trade of Stockholm and the eastern coast of Sweden for 1882, says :—The prospects of trade were far from favourable in the commencement of last year, owing to the prejudicial effects of the bad harvest of 1881, the consequence being a fall in exports and a rise in imports. In the summer, however, the crops throughout the country were most promising ; business thereupon became brisker, especially in the wood and iron markets, and the exceptionally fine harvest which followed gave a decided impulse to commerce generally.

The exportation of wood goods at Stockholm in 1881 amounted to 22,564 cubic metres. and in 1882 to 24,800 cubic metres, of which, 13,475 cubic metres were shipped to Great Britain.

The figures must, however, not be taken as an example of the general condition of the timber trade in Sweden. According to the annual report of the Saw mills and Timber Association for 1882, it appears that the value of the timber trade was about 15,000,000 kronors higher than the preceding year.

Favoured by extrarodinary facilities for floating timber during the whole of the season, the transport to the sawmills was unusually large, and consequently the timber, which, under ordinary circumstances forms a reserve for the following year, has already floated down to the coast.

The association are further of opinion that there will only be small consignments this year, as nearly all the goods have been sold for delivery in this country.

The stored wood goods ready for exportation at the opening of the ports north of Stockholm in 1883 are as follows :—Gefle, 55,000 standards : Soderhamn,, 74,000 ; Hudikswall, 26,300 ; Sundswall, 110,000 ; Hernosand, 57,000 ; Ornskoldsvik, 19,382 ; Umea, 14,000 ; Skelleftea, 8,616 ; Pitea, 15,560 ; Lulea, 23,846 ; total, 404,704 standards ; against 356, 253 standards in 1881.

In the trade and commerce of the principal Vice-Consulates on the east coast of Sweden, Vice-Consul Koperitz reports as follows on the commerce and navigation of Gefle :—The year under review opened with stocks of sawn wood in Great Britain and on the Continent, causing a great demand up to the end of July, and most of the first open-water supply was bought up at remunerative prices. As it was apparent, about the begining of August, that the production would be unprecedentedly large, by reason of the favourable floating season, prices began gradually to recede from the comparatively high figures obtained for spring delivery, and this depression continued up the close of the navigation. At the present time the timber trade of the district is more depressed than it has been for the three previous seasons.—*Timber Trades Journal.*

A Bushel of Coal.

In consequence of the practice of peddlers of coal in Boston of selling by means of short measure, getting retail price for three pecks of coal for a nominal bushel, a law has been passed specifying that in the sale by measure of coal in quantities less than five hundred pounds, the baskets or measures used shall be of a cylinrical form, of the following dimensiou : nineteen inches in diameter in every part, and nine inches in depth, measured from the highest part of the bottom, each of which shall be deemed to be of the capacity of one bushel ; or nineteen inches in diameter in every part, and four and one-half in depth, measured from the highest part of the bottom, each of which shall be deemed to be of the capacity of one-half bushel. Such measures, in selling, shall be filled level full, and shall be sealed by a seal of the city or town in which the person using the same usually resides or does business.

JONES & SON,

Wholesale Lumber & Timber Dealers

39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

L7

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec :—

Aug. 30.—J. J. Calvin & Co., oak, &c., sundry coves.

J. R. Booth, white pine, &c., St. Lawrence Docks.

John McAllister, walnut, Roche's cove.

Thos. Buck, elm, &c., Wolfe and Ottawa coves.

Sept. 6.—J. J. Calvin & Co., oak, &c., sundry coves.

J. R. Booth, white pine, &c., St. Lawrence Docks.

John McAllister, walnut, Roche's cove.

Plamondon & Auger, tamarac, Archer & Co's. wharf.

Frs Burk, elm, &c., Wolfe and Ottawa coves.

R. & G. Stricklaud, white pine, &c., Cap Rouge.

F. & W. Murray, white pine, &c., St., Michael's cove.

Thompson & Son, white pine, Woodfield.

D. Moore, white and red pine, Cap Rouge.

Steel Nails.

At first the extra cost of steels nails was one and a half cents per pound, or $1.50 per keg, but it has now beeu reduced to $1. The great advantage of the steel nails is that they can be driven into hardwood as easily as an iron nail will go into a pine board. Steel nails have been driven into a white oak knot without bending. Nothing else is now used in laying hardwood floors, as they require uo boring, but are driven readily. For all kinds of finish they are especially adapted, and as so much hard finish is now employed, their use must be on the increase. They are also used largely by builders, and box makers are increasing their demand for them. Box makers have been using the better grades of iron nails, as they desire those that can be drawn and redriven.

Journalistic.

A new organ of our manufacturing industries has just appeared under the name of *The Dominion Mechanical and Milling News.* It is published in Toronto by the Beaver Publishing Company, and its first number gives promise of a valuable addition to our periodical literature. It is full of news and technical information of interest to the class it addresses, and both the letter press and illustration are very clearly printed on excelleut paper, so that its appearance is as interesting as its contents are useful. Such a periodical is another evidence of the progress of Canada as a manufacturing country.

DRY ROT.

This is a disease in timber, which occasions the destruction of its fibres, and reduces it evontually to a mass of dry dust. It occurs most frequently in a warm, moist, stagnant atmosphere; while wet rot is the result of exposure of wood to repeated changes of climatic conditions. In both diseases, however, spontaneous combustion or decomposition goes on in the wood; water, carbonic acid gas, and probably carburetted hydrogen are evolved, and a pulverulent substance or humus remains. Although the appearance of fungi accelerates the process of dry rot, its true origin is in the incipient decomposition of the sap in wood.

The commonest precaution against the occurrence of the disease in wood is to expose it to the air, or, in other words, season it.

Charring, steaming and bolling have been resorted to as a means of dessecation. Mr. Lukin, at Woolwich dockyard in England, experimented on green oak logs, with pulverized charcoal heated and applied as a coating to the timber. This process had the effect to lighten the wood, but disintegrated the fibre, thus rendering it useless. He then attempted to replace moisture in these heated logs with a distillation of pitch pine and sawdust, but failed to accomplish any favorable results. Since then, other processes have been perfected, by which wood is exposed to currents of rapidly moving hot air, and in kilns; these have been used successfully for years, and many of our large saw-mill manufactories have dryers attached to them whereby to put seasoned lumber on market in the shortest space of time possible. The ancients understood the advantages of felling trees when the sap was out of them. As early as the reign of King James, of England, a statute was enacted prohibiting tho felling of oak trees, except from April 1st to June 30th, even for the King's use, except to repair his majesty's ships of war. In 1771, Mr. Barnard, of Deptford, England, stated in the House of Commons that timber should be barked in the spring, but not felled until the winter time.

In France, the timber cutting season was from the 1st of October to the 15th of April, until Napoleon I.'s reign, when the limited period was fixed from November to March, and then only on the decline of the moon, on account of the supposed rapid decay of wood from fermentation of the sap when cut at any other period.

Submerging timber in water has for centuries been considered a prevention from dry rot, and certain it is that by that process the disease has been arrested. The frigate, "Resistance," whose timbers were badly affected, was rendered sound by sinking her for one month in the harbor at Malta. The "Eden," similarly affected, and sunk in the harbor at Plymouth (England) was raised in a perfectly sound condition after 18 months' submersion, and was once more a seaworthy craft.

Salt has been found an efficacious preventive of the disease. though it has the objectionable quality of attracting too much moisture. The subject of preserving wood has been one of constant interest to builders, naval architects, and in fact, to every one it is a question worthy of constant thought; hence scientists have devoted much time and study to discovering substances for preserving it. In 1832, corrosive sublimate was tested, this was soon followed by zinc chloride, and copperas, followed by sodium carbonate. It was in 1838 that Bethel introduced the the treatment of wood by crude creosote and oil of coal tar. This discovery has been found the most valuable of any, and when the wood is injected with coal tar, in a cylinder at a temperature of 120 deg. Fahreinheit, and a pressure of 150 pounds to the square inch, ordinary soft wood will absorb about ten pounds of the material per square foot, and afterwards become almost indestructible.—*Lumberman's Gazzete.*

Aged Timber.

A few miles from San Francisco a tree was recently felled which, as American writers think, is one of the oldest, if not the oldest tree in the world. It was one of the *Wellingtonia* species, and, according to the rings which were counted, its age was no less than 4,340 years. It was partly hollow, and within the bark three hundred persons could find standing-room. It was only with reluctance that this ancient giant of the forest was cut down, but its removal was imperative, as it threatened to come down of itself during the first violent gale. Another ancient tree which was recently destroyed was a cypress tree near Sparta. It is stated that this was the very tree spoken of more than two thousand years ago by the ancient Greek writer Pausanias, and wae then very old. It was accidentally destroyed by fire, a band of gipsies having lit a fire under it to cook their food and incautiously allowed the flames to reach it.

VALUABLE SOUTH AMERICA TREES

Some investigations by M. Thanneur, eays *Engineering*, show that South America is rich in woods for engineering purposes. The yandubay is exceedingly hard and durable; the couroupay is also very hard and rich in tannin. The quebracho is, however, more interesting than any, and grows abundantly in the forests of La Plata and Brazil. It resembles oak in the trunk, and is used for railway sleepers, telegraph poles, piles, and so on. It is heavier than water, its specific gravity varying between 1.203 and 1.333. Its colour at first is reddish, like mahogany, but grows darker with time. Being rich in tannin, it is employed for tanning leather in Brazil and has recently been introduced for that purpose in France. A mixture of one-third of powdered quebracho and two-thirds of ordinary tan gives gooods results.

Proposed New Ship Canal in England.

A ship canal is projected from Bristol Channel across the peninsula of Somerset and Devon to the English Channel. The length of the canal will be 62 miles; the waterway will be 125 feet wide at the surface, 36 feet at the bottom, and 21 feet deep, the dimensions being similar to the grand ship canal of Holland from Amsterdam to the Helder. Such a canal will accommodate ships of 1,500 tons drawing 18 feet. The cost of the now canal is estimated at about fifteen millions of dollars; and twelve per cent annual dividonds on this cost aro expected.

Elm Tree.

A large tree growing at Norwich, Conn., is over soventeen years old, and the limbs are 30 ft. from the ground. It stands alongside a house, tho chimney of which has been swept away by the overhanging branches, while the tree has raised and moved the house one foot by the force of its growth, A similar instance has occurred at Nassau, New Providence, one of the Bahama Islands, A cotton silk tree growing there has attained such mammoth proportions that it has actually lifted a large Government building.

Saw-Mill Boys.

Saw-mills, and places where steam and circular saws are used, employ a large number of boys. If yon were to give a tea-party to saw-mill boys the thing that would astonish you would be the difficulty of finding half a dozen of your guests with the proper number of fingers. I know ono little lad who is employed at pulling out the planks which have been pushed through tho machine by men, and he has one hand now on which only the thumb is left. (!) "How the poor Live," by G. R. Sims, *Pictorial World.*

THE MISSING LUDWIG.

Hope for the SS. Ludwig appears now to have been abandoned alike by the owners and agents, the friends and relatives of those on board and the public generally. She is sixty days out from Antwerp to-day, and her longest antecedent time for making the passage being from fourteen to twenty days, little doubt can be entertained as to her fate. The more hopeful refer to the fact that the Dominion steamship Quebeo was fifty-two days in making her voyage from Liverpool to our port last spring and was forty days without being sighted or epoken; but she was sighted and frequently spoken subseqnently. Of the Ludwig no vestige has been discovered. Theories as to her fate are various, but the most feasible and the one indeed given oxpression to by thoss more directly interested in the ship is, that she has struck an iceberg or heen run into by eome other vessel during the night, breaking in two or more of her compartments and einking almost inetantly. Under such circumstances no time would be left to get out the boats or arouse the paseengers.

The Messre. Steinmann & Ludwig, founders and owners of the "White Cross" line of eteamere, the line to which the ill-fated ehip belongs, are among the moet substantial and enterprising promoters of Atlantic transport service in Europe. Their line consiste of eight first-class steamships, six of which run between Antwerp and New York, and the remaining two, the Helvetia and the Ludwig between Antwerp and this port. The line was established about forty years ago, and the Messrs. Steinnman and Ludwig may be considered in the fullest eenee the pioneers of naval commerce between Antwerp and Montreal. For msny years they used eailing ehips, but more recently exchanged them for steamers, trade having expanded and they having entered into contract with the Dominion Government. The Company have chartered the SS. Surrey, in Antwerp to take the place of the eupposed lost ship Ludwig, but they intend to build a first-class vessel at once to fill up the gap in their line. The Surrey sails for Montreal on September 5th.

The proprietors have lost only two vessels since the establishment of the line, these being on the New York route. Their voyages to and from Montreal have been singularly successful, the Ludwig, if lost, being the only disaster worthy of the name. This is saying much when the perils of the sea, especially from ice in the straits of Belle Isle, are considered. In connection with this matter, a glance at some statistics regarding British ehipping in general for some years past may be interesting. Taking the year 1882 as an example, we find in Lloyds' *Register* that no less than 996 vessels sailing under British colors, were returned as lost, broken up or not heard from. The aggregate tonnage of these vessels was 373,700 tons. The number of ships built during that time was 878; an aggregate of 928,369 tons, showing that there were 118 more ships lost belonging to the United Kingdom than were built there and registered. The aggregate tonnage of thoee built exceeded those lost by 554,664 tone. During the year four ships a day were lost.

The present season appears to have been unusually prolific of disasters such as that which has probably befallen the Ludwig; the number of steamships, in all waters taken together, during the first eix months of the year, which sailed from their ports and have never eince been heard of, being no less than 27.

A THRILLING SCENE.

Recently at Perranporth, near Truro, England, the driver of a waggonette party wandering on the beach found his retreat cut off by the tide. He essayed to climb the cliffs, but when half-way up he found progress impossible and descent certainly fatal. The ledge on which he was supported would only give space for one foot, and the ground to which he clung above was loose and crumbling. For some hours he endured his suspense, when the visitors descried him from above. The news spread and a crowd congregated, but none dared venture along the slight ledge by which alone the man could be approached. To have thrown a rope would have been useless, for the effort to catch it would certainly have caused the poor fellow to fall.

A coastguardsman, named Regan, volunteered to be let down 100 feet over the face of the cliff, and while he descended the excitement was quickened tenfold. The man below could only hold ont a little longer, and the least disturbance of the earth around him would inevitably cause his distruction. In breathless eagerness the spectators saw the one man near the other.

By a sudden effort the coastguardsman clasped the man he had endeavored to save with a sudden and strong grip, and they swung off the ledge together. Even then danger was not at an end; but a descent was safely affected to a ledge below, when access to the summit was gradually gained.

The spectators were too overcome to cheer, but they did what was better—collected a good round sum for the gallant coastguardsman.

TERRIBLE STORM.

ST. PIERRE, Sept. 4.—Thursday's storm exceeded in violence the cyclone of the previous Sunday. The damage to shipping is incalculable. A large proportion of the fishing fleet is disabled. Some fifty vessels have already arrived completely stripped. The lose of life is appaling. Jacquet's banker lost six men, Hardy's vessel eix, Vincent's eix, Leoni Coste's four, Demalvillain's two, and almost all one or two men. Louis Jourdan's vessel foundered after the storm subsided. The crew were saved. Over thirty vessels are missing, Not the slightest intimation of the approach of the storm was given, except a rising of a dense black cloud on the eastern sky with loud peals of thunder. Before half an hour elapsed the wind was at its height and the sea mountains high.

"LEAVES have their time to fall," says the poet, but Wild Strawberry leaves are on the rise just now, being utilized in such enormous quantities in making Dr. Fowler's Extract of Wild Strawberry—the infallible remedy for Cholera Morbus, Diarrhœa and other Summer Complaints.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

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English Extract of
BUCHU,
One of the Best
KIDNEY
INVESTICATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

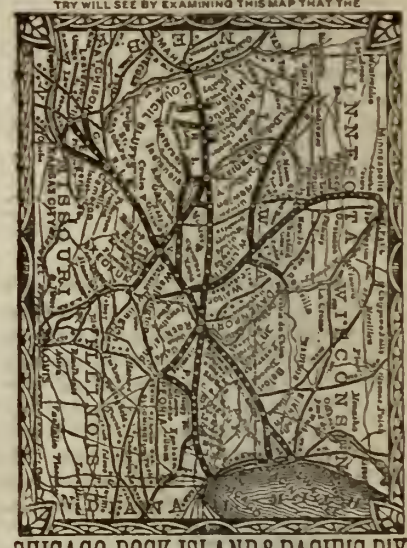
PRICE, $1; or, Six Bottles for $5.

Send for Circular. Sold by all Druggists.

W. JOHNSTON & CO.,
161 Jefferson Ave., DETROIT, MICH.

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

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LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills L7tf

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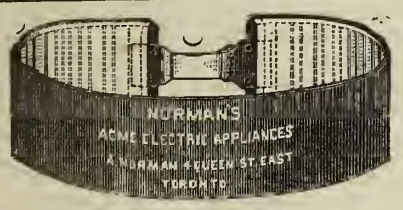
Established 1874.



Established 1874.

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Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1YL7

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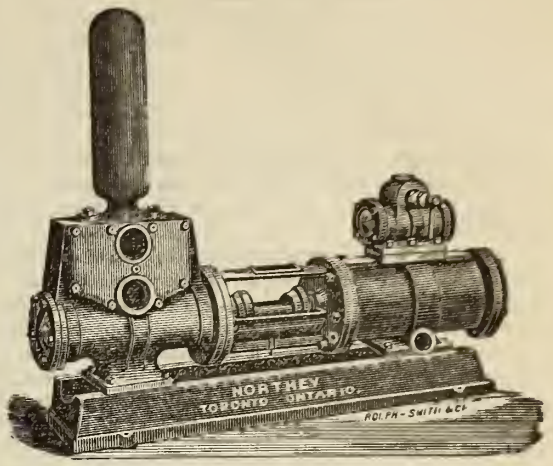
STEAM PUMPS

FOR ALL DUTIES.

ILLUSTRATED CATALOGUE AND PRICE LIST ON APPLICATION.



ALL WORK ABSOLUTELY GUARANTEED.

☞Combined Steam Fire Pumps and Boiler Feed Pumps for Saw Mills, Etc., a Specialty.

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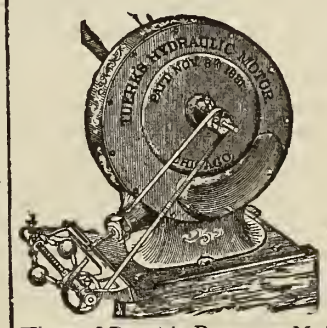
Corner FRONT and PARLIAMENT Streets, TORONTO.

7L12

TUERK'S

WATER MOTOR.

Patented November 8th, 1881.



View of Tuerk's Pressure Motor, with Tuerk's Improved Governor Attachment.

For running Sewing Machines for families or for manufactories; also, for running Dental Lathes and Engines, Telephone Generators, Coffee Mills and Roasters, House and Church Organs; also for running one Printing Press or six, at the same time. Paper Cutters, Sausage Machines of any make or size; GRAIN, FREIGHT OR PASSENGER ELEVATORS, Straw Cutters, and all kinds of Machinery by Water Power.

HYDRANT PRESSURE.

☞Cheaper, Quicker and Safer than Steam.

Over Fifty Motors of other makes have been taken out and replaced with the TUERK MOTOR; among the list are the Backus, the Sabin, the Little Giant, the Hayward, Clark's Piston Engine, and others.

Names of a few who have taken out Backus Motors and put in the Tuerk Motor in their place:

C. W. Meikel, Indianapolis, Ind.
Columbus Telephone Co., Columbus, Ohio.
James Egan, Chicago, Ill.
H. C. Hawkins, Cleveland, Ohio.
Printing Office, Hannibal, Mo.
A. Solmens, Hat Manufactory, So. Norwalk, Ct.
Lake Shore & Mich. So. R.R. Shops, Elyria, O.
Index Printing Office, Evanston, Ill.
Republican, Johnstown, N. Y.
Tribune, Salt Lake, Utah.
Alton Printing Co., Alton, Ill.
A. F. Worthington & Co., Cincinnati, Ohio.
Lemon & Co., Waverly, N. Y.
Braun & Jones, Cedar Rapids, Iowa.
Gates, Douglas & Co., Cedar Rapids, Iowa.
Village of Rutland, Rutland, Vt.
W. L. Randall, Chicago, Ill.
A. J. Stoll, Sandusky, Ohio.
Killits & Wayland, Chillicothe, Ohio.
S. A. Morrow, Springfield, Ohio.
R. Putnam, Chillicothe, Ohio.
N. Shelton, Omaha, Neb.
H. J. Lewelling, St. Helena, Cal., and others.

☞Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

Send for Catalogue, and state what you want to run,—give full particulars and Water Pressure per square inch.

TUERK BROS. & JOHNSTON,

86 and 88 Market Street, Chicago, Ill.

DEVICE FOR DISCHARGING WATER FROM VESSELS.

Last week a successful practical trial was made in this harbor of Keating's improved device for discharging water from ships without pumping. The invention consists of a valved tube which passes through the hull of the vessel, at or about midships. The tube is arranged to be pushed down outside of the hull when in use, and withdrawn even with hull when not in use. The tube carries a valve, by opening which communication between the inside of the hull and the water outside may be established. The extremity of the tube, looking toward the stern of the vessel, has an orifice, but the front portion of the tube is solid. When the tube is pushed down through the ship's bottom, the forward motion of the vessel will produce a suction in the tube, and if the valve is opened the water in the hull will be drawn out.

The inventor expects that sailing and steam vessels may be kept dry and prevented from sinking by simply adjusting the tube and valve as above indicated. On the recent trail here the valve was applied to an old scow sixty feet long, towed by a tug. The valve was open and water was ollowed to flow in and fill the scow until it was almost ready to sink; the tug was then started, and under a speed of three miles an hour the scow was in ten minutes relieved of its water in the manner discribed. A similar trail was lately made at Buffalo, N. Y., with equal success. The invention has realized in practice all that the inventor claims, as far as it has been tried. How it will work on deep draught vessels, where the water pressure against the bottom of the hull is increased, has yet to be shown. The Keating Company, No 86 Duane Street, New York, is now ready to furnish and attach this novel appliance to vessels of all descriptions.

Brooklyn Bridge Traction Cable.

Splicing the endless cable that is to be used in propelling cars over the New York and Brooklyn Suspension Bridge was a work requiring unusual skill, as it was an unusual task. The rope is a compound of a hemp core or center and an envelope of steel wire. It is 11.600 feet long, or about two miles. Its weight is 3.1 pounds per foot, which gives it 35,900 pounds for a total weight. The diameter is 1½ inches, and it has a breaking strength of 50 net tons. The splice is 160 feet long. It would be useless to our readers to attempt a description of the method of splicing, which, however, is similar to that of hemp or Manila rope splicing so far as that is applicable to this composition cable. The skill particularly required in this work is the union of the steel wire envelope. And this work is so exactly completed that to designate the splice from the other portions of the cable it has been painted white. It is probable the longest rope splice ever made.

Timber and Eathquakes.

Consul Denius, in his annual report, says: Wood for the construction of houses is an important item among the imports of Smyrna, as the houses of the lower orders are built entirely of wood; and those of the better class, which outwardly appear to be solid construction, have skeletons of wood merely faced with stone—a system adopted to lessen the danger arising from earthquhuakes. Both timber planks come chiefly from Austria, Russia, Roumania, and European Turkey. In 1877 the import was confined to planks, which accounts for the small import for that year, amounting only to £11,660, against an average of £136,000 for the four following years, in which there was little variation in the quantity of planks, while from 13,000 to 16,000 tons of timber were added to the import each year

Important Purchase.

The Montreal *Star* says that at the meeting of the Directors of the Franco-Canadian Colonization Company held at Quebec, it was decided to purchase from Mr. Senecal all the timber limits of the Hall estate, the mills, wharves, etc., including some 2,700 square miles, for $2,500,000, and Mr. Meredith, M. P., of Quebec, was instructed to draw the deed of sale. Mr. Shirley, a well known English engineer who was sent out by the shareholders in Europe to examine the property, and upon whose report the purchase was made, states the yearly output of timber alone will amount to eighty million feet, and he speaks of the timber wharves at Montmorency, which extend to some eight miles, as being the finest of their kind in the world. The *Star* is authority for the statement that "Mr. Senecal's profit on this transaction is about $500,000 and he still holds a large tract of the Hall property which he has not sold to the company. The stock books, which were opened about a fortnight age, show that a million and a half has been subscribed in Canada."

A Reduced Cut.

The Buffalo *Lumber World* says:—There is already much talk of reducing next winter's crop of logs. If fewer logs were brought down to the mills next summer, it would be an excellent thing for the trade, but we don't look with any degree of confidonce to see the cut reduced. If the experience of past seasons be any criterion for the future, the talk about a short log crop will be kept up until the men get into the woods, and on up to about driving season. Then it will be discovered that each operator has calculated that if the others cut less timber, he had better make hay while the sun shines by getting out as much as he can. Result—just as many logs as the last season and a good many more than there is any urgent demand for. This has happened a good many times, and it is likely to keep on happening just as long as poor, weak human nature is what it is.

Dakota Enterprise.

The following newspaper item well illustrates the rapid utilization of lumber in new sections of the country: "Towns grow out West. A denizen of La Beau, Dakota, was recently asked what the population of that town was, and he replied: "Well, the first lumber was received two weeks ago last Sunday. Now there are six general stores, one dry goods store, one hardware store, five saloons, one meat market, three lumber yards, one bank, one newspaper office, one telegraph office, a post office (with 280 calls and 80 lock boxs of the Yale pattern, in a building 20x20, two stories high), two hotels, and some stuctures. Since then there has been started another bank, a 50 room hotel, a hardware store, a dry goods house 30x80, and a Presbyterian church."

THE St. John, N. B., *Telegraph* says that shipments of hacmatac railway sleepers have been made this season by Mr. A. B. Spence, to Philadelphia, to the amount of about 40,000. The sleepers were loaded at St. John, various points on the river, Moncton and Hillsboro. Mr. Spence is also a large dealer in ship-knees, of which he has shipped to the United States ports about 20,000 since May last.

He Believes in the Millstone.

A letter under the above heading and written from this town appears in the *Dominion Mechanical and Milling News* as follows:—

SIR,—I am pleased to learn that a journal devoted to the interests of the milling fraternity is to be published and I wish the enterprise every success.

I would like to say a "few words" anent Rolls v. Burrs. I have worked at milling from boyhood, am thoroughly conversant with the different kinds of wheat, and the methods in use for reducing the same to flour. I would like to ask a question and it is this: How is it that so many millers are rolling their mill-stones out, and allowing the rolls to roll into their place? Pardon this lame attempt at a pun. I still cling to the "time honoured" mill-stone, and assert without fear of contradiction that it burrs are properly cared for no "complete" (?) roller system can afford to dispense with them. It is not my intention to speak disparagingly of rolls, as I think they may be good in their place for crushing grain, etc., but for good bread-making quality of flour together with close yields, and consequantly profitable milling, give me the "old fashioned way."

I would like to hear from some "brother duster" who has become a convert to the "new process" or "gradual reduction" style of milling, and I can assure him that I am prepared to "enter the lists" with him, provided that I am allowed the same bolting facilities which are given to roller mills, and therefore as a millstone miller, I will not yield the plain to the roller mill, and am determined to die hard.

Apologising for tresspassing on your time and space,

I am, yours truly,
JOHN KING.

Peterborough, 27th August, 1883.

Giant Rafts.

That "giant" raft, the arrival of which in New York harbor from St. John, created so much comment among the lumbermen of the metropolis, was a smaller affair compared with the one now on its way from Lake Superior to Alpena for the Prentiss Lumber Company. The New Brunswick raft contained but a little more than one million feet, while the Lake Superior raft contains three million feet. The New York arrival was noticeable only because it was the first attempt to transport timber in that way from St. John. Such rafts are of every day occurence on the lakes, although not made up as the ocean raft was. It is not necessary to bind the logs with chains.

The Bay City *Lumberman's Gazette* says that lumbermen are beginning to get ready for the woods, and some heavy contracts on the Tittabawassee, Muskegon and other streams have already been placed. At present prices for supplies, compared with last year, the cost of keeping men and teams in the woods should be less than last season.

LAST blocks are said to be an important article of manufacture in the towns of eastern and northern Maine. Blanchard, Lagrange, Alton, and Katahdin Iron Works will each ship about 25 car loads this season over the Bangor and Piscataquis railroad. Large numbers are also cut on the line of the Eastern & North American division of the Maine Central, and also in the towns to the eastward of Bangor. The blocks are cut from rock maple, and the work of getting them out gives quite remunerative employment to the farmers and their sons during the long winter months. A million and a half of these blocks, valued at about $36,000, were shipped from Bangor last year, principally to western Maine, New Hampshire, and Massachusetts shoe towns. This, however, by no means includes all the last business of this section, as large quantities are shipped each season by way of Calais.

The Jordan Canal.

Although the Jordan Canal would wipe away many interesting landmarks of Biblical history, Sir Admiral Inglefield states that so far he has received only encouragement to go on with the work from clergymen who have written to him upon the subject. They regard the enterprise, it appears, as the fulfilment of a prophecy to be found in the forty-seventh chapter of Ezekiel. If one will turn to that portion of the Old Testament he will see how it speaks about bringing out the waters towards the east country into the desert and then down to the sea. It mentions, moreover, the healing of the waters and the appearance of a great multitude of fish. The coincidence of these passages with the details of the Palestine channel scheme is very curious, for the first may be taken to indicate the eastern flow from the Mediterranean through the cutting across the plain of Esdraelon, and thus on by way of the desert to the Red Sea, while the second may be thought to foreshadow the fate of the Great Dead Lake of the Scriptures, its waters sweetened by contact with the invading stream.

Fruitless Ingenuity.

A Detroit convict showed rare ingenuity in planning an escape from prison. He collected the tin foil in which tobacco was wrapped, and with this made an impression of the key that locked the door of the corridor leading to the cells. He then waited till workmen were summoned to repair the closet in the ward, and contrived to secrete a piece of the lead pipe used by them. This he melted in an old tin can over a gas burner, at which the prisoners lighted their pipes during the hours when smoking is allowed. He previously secreted the handle of an old knife, in which a small fragment of a blade remained, and with this he fashioned a mould out of a piece of wood, poured in the melted lead, and turned out a key that with a little whittling fitted the corridor door perfectly. A leg was then wrenched from an iron bedstead for use as a club, the other prisoners were taken into the plot, and a general gaol delivery was agreed upon. The keeper was to be called upon some pretext to the door of the corridor, which was to be unlocked previously, and at a signal a rush was to be made for him by the convicts. The plot was discovered in the nick of time by a mere accidont.

A Slight Mistake.

She was a thin, narrow, dark-visaged woman with "specs" on, and she carried a package of tracklets and leaflets which she scattered broadcast among the sinners in the Cass avenue car in which she rode. When only one or two of the pamphlets were left a man got in. He was on his way to the depot, a countryman, going home evidently. He had a big watermelon, which he disposed of tenderly on the seat next to him, and a glass flask with a rubber cork bold ly out of his coat pocket.

"Hough!" he panted as he stuffed his fare in the box. "Hotter than harvestin' up here, ain't it?"

Everybody looked cold disapproval at him, as good, polite, Christian people do when spoken to in a street car: all but the woman with the "tracks." She fished one out and extended it to him.

"Thankee," he said, receiving it in a brown paw, "comic almanac, hey?"

"No sir," said the woman, firmly, in a high falsetto voice. "It's to save your immortal soul. Touch not, taste not, handle not the wine," and she pointed with a crooked forefinger to the glass flask protruding from the breast pocket.

"Oh, I see," said the man, smiling goodhumouredly on his sour visaged *vis-a-vis*; "but this bottle ain't for me, ma'am."

"Woe unto him that giveth his neighbour drink," quoted the woman fiercely.

"He ain't eggsactly my neighbour eyther," said the man. "You see, it's the new baby, and wife calculates to bring him up by hand, and this bottle's for him, bless his pootsy tootsy. Where's the rigging of it?" and diving into another pocket he fished out some India rubber tubing, etc.

The woman didn't wait to finish her dissertation on temperance, but got out without asking the driver to stop.

A New Invention.

A Chicago inventor, named M. H. Dement, claims to have at last solved the problem of setting type by machinery. He does it by avoiding the setting of type altogether. His invention is a combination of two others, the type-writer and the stereotype process. The machine makes impression of letters on strips of soft paper like that used in stereotype matrices. These stripes, when corrected, are arranged in a sheet which is used as the matrix in which to cast the plate. The advantage the machine has over nearly all former attempts at solving this problem is that it admits of "justifying" the lines,—that is, spacing the words in each line out so as to make the ends even all down the column. The inventor claims that the composition of a large daily paper which now costs from $1,500 to $2,500 a week can be done by means of ahis machine for from $200 to $300. He promises to have machines on the market in four months.

Some Interesting Facts.

The *Financial and Mining News* has evolved the following: Tennyson can take a worthless sheet of paper and by writing a poem on it make it worth $5,000. That's genius. Vanderbilt can write a few words on a sheet and make it worth $5,000,000. That's capital. The United States can take an ounce and a quarter of gold and stamp upon it an "eagle bird" and "twenty dollars." That's money. The mechanic can take the material worth $5 and make it into a watch worth $100. That's skill. The merchant can take an article worth twenty-five cents and sell it for $1. That's business. A lady can purchase a very comfortable bonnet for $10, but she prefers to pay $100. That's foolishness. The ditch digger works ten hours a day and shovels out three or four tons of earth for $1. That's labor.

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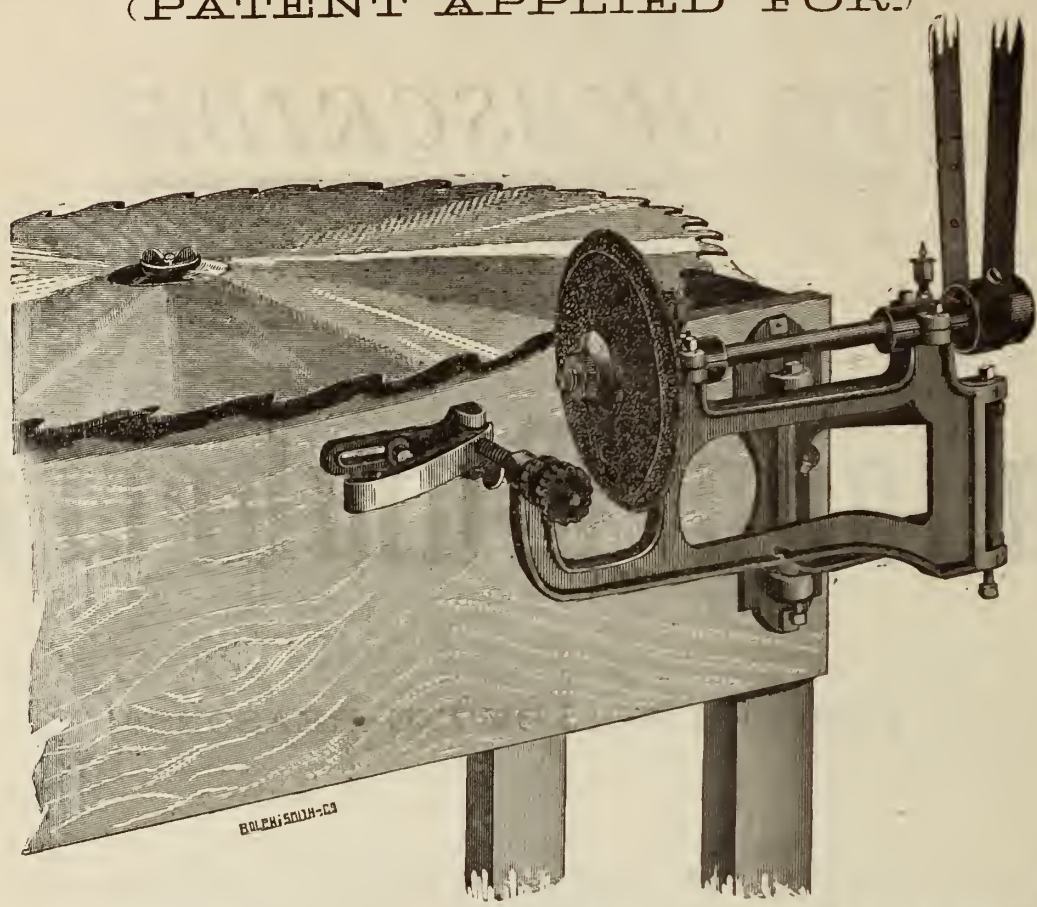

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VOL. 3. PETERBOROUGH, ONT., OCTOBER 1, 1883. NO. 19.

THE TRENTON STEAM SAW MILLS.

During the past season Messrs Gilmour & Co. have made large additions to their mills, very much increasing their size and although the producing capacity has been increased one-third the improved and labor saving machinery introduced under the management of Mr. L. Paquet enables the firm to handle the increased amount of lumber with about the same number of men formerly used.

The first change is noticed by the visitor when he enters the mill premises in the long rows of dwellings erected during the past winter and spring for the use of the employees at the mills. They are very neat and compact buildings and no expense has been spared by the firm to make them comfortable for the inmates.

Upon entering the mill yard, the building we first approach is the planing mill and the general repair and workshop. Here there are two planing and matching machines, which are run day and night to supply the large demand for dressed lumber. A large timber planer and an iron planer besides drilling machines, wood, and iron, turning lathes, &c. are also in this building. The power is furnished by four Tubular Boilers and a 90 h, p.engino. Leaving this building and passing the blacksmith shops on our left and the general mill offices on our right hand side, we approach what is called the "Little Mill." This mill is in two sections one devoted to cutting lumber, bill timber, &c., and the other to cutting shingles, ties, &c. The lumber department contains a large circular saw also a stock gate and slabber gate and turns out about 80, 000 feet of lumber per day. The shingle department contains besides the various circular saws used in cutting the logs into bolts, two double and one single shingles machines capable of cutting 150,000 shingles per day. The power here is furnished by eight Tubular boilers and two engines of 60 and 90 h. p. respectively. There are about 150 men and boys employed at this mill.

Leaving the little mill we approach the "Big Mill" the first thing that striks our attention is the improved appearance of this vast building it having been lately neatly encased in several coats of paint. To get any idea of the immense amount of work done in this mill we must follow the logs as they leave the waters of the bay through the various manipulations they undergo in the mill before they become lumber ready for sale. As the work is all done on the second floor of the mill the logs are drawn up into the mill by endless chains arranged upon log-ways reaching from the water to the upper floor, they are then sent (if very large) to the large circulars the saws of which are arranged one above the other so as to enable them to cut the largest logs that the pine forest produce or if medium sized or small they are sent to two sets of span or twin circulars to be sided down to regular sizes called stocks either 10, 12, 16, 20 as the case may be, they are then put up in piles of four, six or nine stocks according to their size and run through the gang saws these are large frames containing 30 or 40 saws in an upright position and run at a speed of 200 strokes per minute. As the logs pass through these gates they are cut into boards and are at once sorted the good square edged boards going at once to the trimmer to have the ends squared and the waney edged boards go through the edgers and then also to the trimmer.

The lumber at this stage is culled or graded for the foreign market, each piece having its grade marked upon it. The lumber then passes on to the sorting room when each kind of grade is piled separately upon the rollers and run out upon cars when it is ready to be taken to the piling ground. In the mill there is no carrying of the lumber or slabs from place to place by hand as all transfers are made by means of live rollers and moving chains, in fact the machinery is made to do away almost entirely with manual labor. To get any correct impression of the completeness of the machinery and facilities for handling the immense quantity of lumber with so little labor, one must see the mill when working personally. On this floor are also situated the lath, heading, picket and shingle saws by which the lumber and edgings not fit for the market are cut up and utilized. The refuse slab wood and sawdust are conveyed by carriers to some distance from the mill to a sheet iron grater or "Gehenna" one hundred and twenty-five feet in height and then burned.

A peep at the works on the first floor presents nothing to the experienced eye but a perfect wilderness of wheels, pulleys and belts in rapid motion. The power used in driving the mass of machinery used in this building is furnished by 16 Tubular boilers of 100 h. p. each and a monster double or twin engine of over 1,500 h. p.

This mill cuts up daily over 3,000 saw logs and produces about 350,000 feet of lumber, 100,000 lath, 100,000 pickets heading and shingles, and employs in the mill and yards 500 men and boys making a total of over 600 men employed on the premises.

Leaving the mill we go to visit the piling grounds and shipping docks. Some idea of the size of these grounds can be formed from the facts that there is at present over thirty millions of feet of lumber piled on them and that the company have over ten miles of railway laid in them to facilitate shipping and handling it in this service. There are two locomotives and 100 cars used besides several horses.

Great improvements have been made by the firm in their appliances for extinguishing fires they having purchased one of the finest steam fire engines now in Canada. It was manufactured by the Amoskeag Co. of Manchester, N. H., and said by them to be the most powerful engine ever manufactured by them. It throws over 6000 galls. of water per minute and well deserves the name of "The Monarch." In addition to this powerful engine they have placed in their new brick fire hall a stationary pumping engine capable of throwing 1,500 galls. per minute. These appliances in the hands of a well drilled fire brigade form one of the best systems for protection against fire we have ever seen.—*Trenton Courier.*

A GIANT RAFT.

The New York *Times* of August contains the following account of an immense raft which was brought from St. John, N. B., being the first attempt at raft towing in that direction:

The largest string of logs ever made into a raft was towed into the Erie Basin, South Brooklyn, at day-break yesterday morning by the tugs Cyclops and Haviland. The raft is 1,200 feet long, 21 feet wide, and twelve feet deep. It is composed of 11 sections, each of which contains about 500 logs, ranging in size from the diameter of a wagon wheel down to that of a telegraph pole. The logs are piled in huge bundles and strapped together with chains strong enough to tow the Great Eastern. These sections were placed in a string and fastened with a strong hawser to the Cyclops, and Capt. Gally of the Haviland, while the entire expedition was piloted and managed by Capt. Rufus Patterson, of St. John, New Brunswick, the veteran of the Province. The logs were bought by Mr. James Murry, of No. 26 Burling slip, in New Brunswick early this summer. The distance which they were towed is 650 miles, as the ships sail, and the freight would have been very heavy. Mr. Murray accordingly consulted with Capt. C. C. Ellis, of No. 60 South-street, a brother of the master of the Cyclops, who undertook to tow the raft to New York, at a saving of 50 per cent. in freight rates. The raft was constructed, and on Aug. 7 was started from the harbor of St. John. The trip was made without serious accident. The first three days were as calm as could be desired, but on the fourth day Capt. Patterson was obliged to seek shelter in Booth's Bay, where the raft was detained for three days. Pleasant weather was experienced after the storm until Newport was reached, on last Thursday night, when a strong gale separated the crib attached to the Cyclops, from the remainder of the string, which was sent adrift. This was a serious predicament, and the raft was in great danger of going to pieces on the breach at a loss of many thousands of dollars. The Haviland was immediately detached and sent to the rescue of the lost raft, and in the morning the two vessels came together with their charges resumed their original positions, which were maintained during the remainder of the voyage The passage through Hell Gate was easily accomplished, Stand's Point was passed without any difficulty, and at 6 o'clock yesterday morning the great raft was securely anchored in the Erie Basin, where it will remain until it can be disposed of.

The voyage of the raft has occasioned great interest among shippers, as such a trip has never been made before, and it is the general impression that this mode of transporting timber will supersede the shipping on schooners to a very large extent. The Cyclops is the largest tug in the harbor, being 128 feet long. She is owned by Capt. C. C. Ellis.

FOREST FIRES.

In a late paper by Prof. C. S. Sargent, that gentleman gives a striking account of the loss, actual and prospective, suffered from forest fires, and of the necessity for stringent legislation for their prevention. He lays special stress upon the importance of the subject for the New England states, where so large a share of the soil is only adapted to forest growth, and where a goodly portion of our supplies of white pine must come from in future years. These states already have valuable forests of second-growth pine, now reaching a size when they can properly be thinned out, leaving the smaller trees for futureneed. But he states that in Massachusetts alone ten thousand acres of forests are, on the average, burned annually— about one-third of the fires originated from locomotive sparks, and nearly all the rest from carelessness, or other preventable causes.

This burning not only destroys the standing trees, but it makes the investment of capital in growing forests hazardous; it checks the growth of a very desirable industry; and it destroys, as he points out, the capacity of the ground to continue in pine growth. When properly cut, a pine forest may be propagated indefinitely. When burued, there is a long succession of weeds and briars, mountain cherry, gray birch, willows or poplars, maples and ash trees, until a hard-wood growth is established. This maintains itself a long time if left alone; but if the ground be then cleared by cutting, cultivated for many years, and then left free from plow aud scythe, and guarded from pasturing and fire, the white pine will spring up spontaneously after its long banishment. Fifty or one hundred years must pass before this desirable crop will return. In view of so long a delay, Prof. Sargent holds, and of the considerable value that pine will soon command, it is well that special care should be given to protecting and preserving the second growth forest now approaching maturity.

THE schooner Nelsou Bartlett, a three-master, recently brought 3,089,000 lath, an unusually large cargo, from St. John, N. B., to Baltimore.

H. POOR & SON received at their tannery, at Winn., Me., 492 cords of hemlock bark from Wytopitlock station, which amounts to 1,131,600 pounds. About 10 pounds of bark are required for tanning one pound of leather.

THE FORESTRY CONGRESS.

The American Forestry Congress met in annual session August 8th, at St, Paul, Minn., and after an interesting session of three days, adjourned.

In his annual address, the President, Hon. George B. Loring, gave many valuable points of information concerning the forest area of the country, the pine supply, the value of the timber industry, etc. He said: "The forest lands of the United States amount to less than one-fourth of the entire area. The proportion of wooded area is less than in Eastern, Northern and Central Europe, and is very unequally distributed. Norway has two-thirds of its area wooded; Sweden six-tenths; Russia nearly one-third; and Germany nearly one-fourth. The countries having less forest area, arranged in order of proportion, from 18 down to 5 per cent. are Belgium, France, Switzerland, Sardinia, Naples, Holland, Spain Denmark, Great Britain and Portugal. West of the line of prairies running southwest through Indiana, Illinois, and Missouri to the Indian Territory, the central prairies, the dryer plains and much of the southern belt of the Pacific slope are destitnte of wood. The streams in all this great region are more or less fringed with trees of some sort, and the higher mountains, on the protected side, have a thin covering of forest. In the deep valleys of the western slope of the Sierra Nevadas are forests of extraordinary density, filled with soft wooded evergreen trees of enormous size. Here the sequira gigantea or big tree flourishes in isolated patches, while the coast range is the home of the sequira semnivirens, or red wood. From North Carolina to Louisiana nearly six-tenths of the farm area is wooded, though most of the area thinly, and part of it has been culled and is in second growth. Including unoccupied areas not in farms which are in forest, something like three fourths of the entire South is wooded. Comparing the census returns of 1870 and 1880, we find a decrease of wood lands in farm areas in Michigan from 41 to 32 per cent; in Minnesota from 21 to 15, and in Iowa from 16 to 11 per cent. In Nebraska tree planting has changed the record from 3 to 10 per cent. From the increase of farms in the wooded area Wisconsin has 31 instead 29 per cent. Of the value and importance of the forests covering these areas let me say: Next to the white pine of the Northern forests, the most valuable tree is undoubtedly the Pinus Australis, or long-leafed pine of the southern coast land, forming a belt of varying breadth, up to 100 and 150 miles from the Atlantic and Gulf shores. The southern pine will come into still greater prominence, as railroad and steamboat lines extend facilities for transportation, which is now being done with great rapidity.

"The condition of the pine timber supply of the United States, in connection with the statements I have made, is interesting. The destruction of this tree by fire, and the axe of the lumberman is very great. Together with the spruce it is being rapidly consumed, and I think the following figures will show that the supply is to obtained hereafer by allowing an exhausted region time to recuperate, while the comparatively uncut sections, are resorted to for filling the demands of the market. Investigations recently made show that the supply of pine in New Hampshire and Vermonnt is exhausted. and that the spruce lumber, at the rate the cutting is now going on, will last in the former State but 7 years, and in the latter but 4: in the State of Maine the pine will last four years and spruce 15 years; in South Carolina the pine forests will last 50 years at the present rate of cutting; in California, 150 years; in Arkansas, 300 years; in Pennsylvania, 15 years; in Georgia, 80 years; in Lousisina, 100 years; in North Caroline, 50 years; in Winconsin, 20; in Michigan, 10; in Minnesota, 10 years; in Mississippi, 150 years; in Alabama, 90 years; in Florida, 30 years; in Texas 250 years. That the exhausted forests in this list of States can be restored in time there is no doubt, and every means of cultivation and protection should be applied by the people and the government, both State and Federal, each in accordance with its own jurisdiction."

"The black walnut, culled from western forests to meet a limited though important demand is really becoming scarce on the northern side of the Ohio valley; but on the southern, along the foothills and in the valleys of the Appallachian range, it is abundant and almost untouched. It grows rapidly in the Western States, even beyond the Missouri. The millions of acres of existing forests in this great eastern chain of mountains has not yet been considered in the statistics of forestry here presented. Their resources have never been measured, are yet comparatively unknown, and almost untouched by the axe of the woodman."

"In addition to this the white pine of Minnesota is estimated at 6,100,000,000 feet exclusive of isolated timber in birch lands and amidst other hard wood growth. In Michigan, the estimates for the lower peninsular cover 7,000,000,000 feet; In the Saginaw district, 8,000,000,000 on the streams flowing into Lake Huron, and 14,000,000,000 on those flowing into Lake Michigan. The upper peninsular contains 6,000,000,000 more, making 35,000,000,000 feet in the principal pine districts in Michigan. The great pine forests of Winconsin are estimated to contain 41,000,000.000 fect of lumber, the largest propertion in the Chippewa and Winconsin districts. They cover an area of 22,500,000. The northern border of the pine area is less productive than the areas of the lower latitudes. The cedar swamps of Winconsin scattered the pine belt are estimated to cover 1,365,000 acres, and to contain 62,800,000 posts, telegraph poles and railroad ties. There are also large supplies of tamarack and spruce and valuable oak timber, especially in Dunn, Pierce and St. Croix counties, and other hard woods are abundant through the southern border of the wooded districts. The united area of the States south of Maryland and the Ohio river is more than 500,000,000 acres, containing nearly 400,000,000 acres of forest land."

BRITISH COLUMBIA FOREST.

We extract from the Report of the Committee on Immigration and Colonization the following portions of the evidence of Dr. George W. Dawson, F. G. S., Assistant Director of the Geological Survey:—

Q. Will you please inform the Committee as to the timber recources of British Columbia, the country over which the Douglas pine occurs, and other timber trees at present or likely in futuro to be of value? The Douglas pine, I understand, is of the greatest commercial value just at present?—This map (produced, published in Report of Geological Survey 1879-80) will illustrate some of these points. It shows the range of the Douglas fir and some of the other important timber trees. So far, the Douglas fir or Oregon pine, as it is also called, is the only tree that has attracted much commercial attention. It has been largely cut and exported. It is found on the whole eastern coast of Vancouver Island and on the coast of the mainland opposite to it. It extends northward a little back from the coast as far as the Skeena River, and in the northern part of the interior of the Province as far north as Tacla and Babine Lakes. The timber which occurs immediately on the coast, is, however, indisputably the best. There are magnificient forests there, composed almost entirely of the Douglas fir, and naturally, on account of the facilities for shipment, they have attracted the most attention, The quality of the timber is excellent and the size of the trees is great. One that was cut down at Burrard Inlet for the Philadelphia Exhibition, of which a section is in the Parliament grounds now, was measured to be 305 feet in height, had a thickness of 8 ft. 4 in., 20 ft. above the ground, and was perfectly sound thoughout. Many of these logs measure as much. Commercially speaking, the medium sized logs are more useful in the mill than these exceedingly large ones. The localities chosen for the mills are selected in regard to facility of shipment, and those now working are chiefly situated on Burrard Inlet. In addition to the Douglas fir, there are a number of other trees in British Columbia which are exceedingly valuable, and which will eventually attract a good deal of attention. There is the cedar, which sometimes attains a diameter of 17 feet, though geuerally those very large trees are more or less hollow. There is the spruce, which is an excellent wood, not so soft as our spruce on this side of the continent, and a different species; the white pine, not the same as the eastern white pine, but producing an equally good wood. As a rule this tree is remote from the sea coast, so that it has been utilized only to a small extent so far. The hemlock, again, grows to a much greater size than our hemlock, and produces good, clean lumber, and that tree is found along the whole of the coast and over a considerable part of the interior. The maple, which is rather an inferior wood, except for cabint-making purposes, owing to the curly grain, is only found on the coast. The oak is confined to the southern part of the coast, and is not in sufficient quantity to be looked upon as a commercial wood on a large scale. The yellow cedar or yellow cypress is another wood that has attracted much notice. It is found chiefly on the northern part of the coast, and is an exceedingly fine wood for cabinet-making. It is a close wood, and very lasting, penetrated by resinous substances which protect from decay to a very great extent, and give it a peculiar odor. In the interior of the Province there is the yellow pine, which inhabits the dry southern part of the plateau, and is locally a tree of great value. In fact, it is the wood most used in the interior, in some districts even in preference to the Douglas fir, where that occurs, I might state, in general, that every part of British Columbia is amply and well provided with excellent wood for construction and other purposes. The coast has the preeminence in that respect, owing to the facility of export and to the gigantic size of their forests, due to the mildness of the climate and its humidity.

Q. Point out the northern and eastern limit of the Douglas fir?—The northern limit is on the Skeena, and on Tacla and Babine lakes. To the east the limit is at the Rocky Mountains. It is abundant even on the eastern slopes of the Rocky Mountains, as far east as the Porcupine Hills, and is now being extensively used for construction in the western part of the prairie region.

Q. Principally on the rivers that may be utilized for bringing it to market?—On the eastern slope of the Rockies, yes; but on the west the timber business is carried on by floating the logs down rivers as it is here, because of the large size of the logs and the rapidity of the streams. Nearly all the timber cut for exportation on the west coast is drawn out, either by teams or on small steam tramways, to the shore, launched into the sea and towed to the mill.

Q. Will you give us your opinion as to the timber resources of Vancouver and Queen Charlotte Islands respectively?—The chief difference between Vancouver and Queen Charlotte Islands, in regard to timber, is that on a large part of Vancouver Island the Douglas fir is found abundantly, while in the Queen Charlotte Islands it is not found at all. It is replaced there by cedar, hemlock and spruce, and the yellow cypress or yellow cedar. An area of about 1,900 square miles of the flat part of the Queen Charlotte Islands is covered very densely with excellent timber, but it does not include the Douglas fir and the Islands are rather north of the usual merchantile routes at present, it has not given rise, so far, to the erection of any mills. There are very excellent sites for mills, however, in the Islands, particularly at Naden and Massel Harbors, and other places where streams from the low country reach the sea. The timber of the Queen Charlotte Islands I look upon as one of the most valuable immediate resources of the Islands, and as soon as the demand for timber shall increase a little more, they will, no doubt, be utilized. Another feature with regard to these Islands is that, owing to the humidity of the climate, the woods have been very little affected by forest fires, and even where large quantities of rotten and decayed trunks, of great thickness, have accumulated on the ground, they lie there and go to decay rather than burn.

Q. Speaking of the cedar as a commercial wood, you say sometimes it grows to a diameter of 17 feet; are the trunks covered with branches, or are they comparatively free from branches for any considerable distance from the ground? The cedar is apt to give off a number of branches, but when it attains large dimensions, the living branches are generally near the top. These very large trees are more or less hollow generally. The Indians select the largest sound cedars they find for their magnificent canoes, and the dimensions of those canoes show how large such trees may be found when one goes to search for them carefully. I might state, however, in connection with the Queen Charlotte and Vancouver Islands, that, as the area of Vancouver is considerably greater than Queen Charlotte Islands, doubtless the timber supply of Vancouver is more important than that of Queen Chaalotte Islands, at least, in correspondence with the areas.

Q. What is the diameter of the largest tree you have seen in British Columbia, and are there very many of that size or nearly approaching it?—I cannot state precisely the diameter of the largest Douglas fir I have ever seen; when a specimen was selected to send to Philadelphia Exhibition, one was chosen which was sure to be sound throughout. and there were larger trees they were not sure about. This tree had a diameter of 8 ft. 4 in., and a height of 105 ft., and there were a great many in the vicinity of Burrard Inlet approaching to this size. In fact, whole areas of forest are composed of trees of similar size.

Q. What is the average size of logs sawn in the mills at Burrard Inlet?—I should say the average size must be between 4 feet and 5 feet.

Q. In diameter?—Yes. in diameter.

Q. What class of spars can be got out, *i. e.*, their length and diameter?—Spars and masts of any size desirable for shipping can be easily got in British Columbia, and are unsurpassed for straightness and strength. I believe masts have been usually shipped hewn to octagonal form from 20 to 30 inches in diameter and 60 to 120 feet long. They have been shipped to special orders as large as 42 inches in diameter and 120 feet long. Yards are generally from 12 to 24 inches in diameter and 50 to 102 feet long.

Q. How does the timber at Burrard Inlet compare with that at Puget Sound, as to size, quality and market prices?—It is probably about the same in both places; or Burrard Inlet, not being as much cut into as Puget Sound, probably contains in proportion to its area more valuable timber at the present time.

Q. Are there any places in Vancouver Island adapted for the erection of saw-mills?—A great number of localities. For instance, in the vicinity of Cowichan and northwest towards Comox, where there is a large area of flat country covered with fine timber, besides Alberni Canal and other places on the coast.

Q. Have you any means of knowing the principal markets to which British Columbia lumber and spars are shipped, the prices obtainable in those markets, and the general opinion of its quality?—I cannot state the prices obtained in the markets. It has been shipped to a small extent to San Francisco—not in large quantity because of the duty. A good deal has been sent to South America, and to Australia, some occasionally to China, and masts and spars have been exported to England and France. Its quality, tested by strength and in other ways, is excellent, particularly for masts and spars. The only respect in which the Douglas fir compares unfavorably with white pine is its somewhat coarser grain, and that is connected of course with its greater strength.

The last raft of square timber of the season has passed through the Calumet slides.

The Hasting *Star* says that Rathbun & Son's drive of 150,000 logs has passed through there.

In a description of the great Bell Farm in our Northwest Territory a correspondent of the London Ont., *Free Press* says:—The farm is ten miles square, and there is being planted a grand avenue of 10,000 poplar trees, ten miles in length. Some of the trees were planted last year and are healthy, and average from 12 to 15 feet in height.

READER, if you suffer from any disorder of the Liver, Stomach, Bowels, Kidneys, Skin or Blood, try Burdock Blood Bitters, Nature's specific medicine for acting on those organs for the outlet of disease. 25,000 bottles sold in the last three months.

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As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

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Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills

L7tf

FOREST FIRES.

Several weeks ago we especially urged extra precaution everywhere to prevent forest fires, which, owing to the conditions attendant on the dry and decaying vegetation, were liable to break out on the very least provocation. The advice given at that time was timely and suggestive; and people have exhibited great laxity in precautionary measures, so much so that we see accounts of great destruction in many directions. All over New England vast damage has resulted from forest fires of late. They are the result of the very causes to which we alluded at the time mentioned. The drouth has dried up the brooks, and transformed the country there into a veritable tinder box. Many of these New England fires are caused by carelessness on the part of hunters, who leave their unquenched camp fires or carlessly drop their matches with which they light their pipes, and in a very few hours an uncontrollable flame carries destruction with it in every direction, until cities and villages are threatened with complete destruction. The damage from this source already amounts to hundreds and thousands of dollars, and in many directions the people en masse are compelled to desist from their usual vocations to fight the destroying element. The danger in Michigan from the same source is not yet past and will not be until the setting in of the heavy fall rains, and the utmost care, and every precautionary measure is desirable in order that the great danger may be averted, and a repetition of the desolation of 1880 avoided. Every local paper in the Wolverine state should not desist from sounding the alarm until the dry season is at an end.—*Lumberman's Gazette.*

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec:

SEPT. 20.—J. J. Calvin & Co., white pine, oak, &c., sundry coves.

Stokes & Kelly, walnut logs, Bowen's (Sillery).

British Canadian Timber Co. white pine, etc., St. Lawrence Docks.

J. B. Charleson, staves, Union cove.

E. L. Kelsey (2), staves, Woodfield and Spencer coves.

Stokes & Son, staves, Dobell's (Sillery).

Collins Bay Co., oak, etc., Spencer cove.

Tree-Planting Extraordinary.

The Mexican Government has contracted with Mr. Oscar A. Droege, to plant 2,000,000 trees in the Valley of Mexico within four years from March 15, 1884—500,000 a year, in such places as the Government shall choose. The contractor pledges himself to establish a number of nurseries and to have in them each year at least 800,000 ash, 35 000 willows, 120,000 poplars, 60,000 eucalyptus trees, 60,000 trœnos-japones, 60,000 mountain cypress cedars, 60,000 acacias, and 120,000 of miscellaneous varieties. The trees must be in plantations of from 50,000 to 100,000 each, and Mr. Droege has to maintain them for two years after planting. He is not compelled to plant trees along the highways, however. Three graduates of the School of Agriculture are to be received into the nurseries each year, there to study the science of forestry. He is also to raise fruit and other useful plants for free distribution. There is to be translated from the German every year a work on arboriculture of recognized merit. An inspector is to superintend, and Mr. Droege is to receive annually 40,000 dollars (£8,500) till the sum reaches a total of 200,000 dollars (£42,500),—*Pall Mall Gazette.*

Jailing Logs.

The *Northwestern Lumberman* says:—It is a common thing for people to be jailed, but it is for the C. N. Nelson Lumber Company, of Cloquet, Minn., to introduce a practice of jailing saw logs. Last week this company was driving into what is termed up there a "jail boom" a quantity of logs, belonging to the Duluth Lumber Company and other Duluth parties; and as a continuance of the unpleasantness that has existed on the St. Louis for some time, the logs will be held in chancery until the tolls exacted by the Cloquet company are paid.

Deal Culler's Deputation.

An Ottawa despatch of Sept. 20th, says:—A deputation of deal cullers from Quebec, accompanied by the Supervisor, waited on the Deputy-Minister of Inland Revenue, seeking a more equitable distribution of the earnings of the staff. They subsequently waited on Sir Hector Langevin.

A manufactory of barrels, kegs and wooden ware generally is being established in Montreal with $100,000 capital.

"LEAVES have their time to fall," says the poet, but Wild Strawberry leaves are on the rise just now, being utilized in such enormous quantities in making Dr. Fowler's Extract of Wild Strawberry—the infallible remedy for Cholera Morbus, Diarrhœa and other Summer Complaints.

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Has stood the test for FIFTY-THREE YEARS, and has proved itself the best remedy known for the cure of **Consumption, Coughs, Colds, Whooping Cough and all Lung Diseases** in young or old. SOLD EVERYWHERE.

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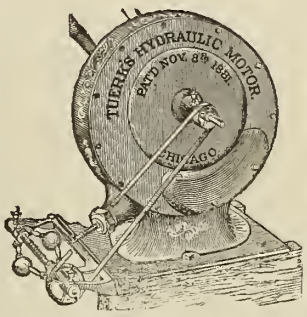
Patented November 8th, 1881.



View of Tuerk's Pressure Motor, with Tuerk's Improved Governor Attachment.

For running Sewing Machines for families or for manufactories; also, for running Dental Lathes and Engines, Telephone Generators, Coffee Mills and Roasters, House and Church Organs; also for running one Printing Press or six, at the same time. Paper Cutters, Sausage Machines of any make or size; GRAIN, FREIGHT OR PASSENGER ELEVATORS, Straw Cutters, and all kinds of Machinery by Water Power.

HYDRANT PRESSURE.

Cheaper, Quicker and Safer than Steam.

Over Fifty Motors of other makes have been taken out and replaced with the TUERK MOTOR; among the list are the Backus, the Sabin, the Little Giant, the Hayward, Clark's Piston Engine, and others.

Names of a few who have taken out Backus Motors and put in the Tuerk Motor in their place:

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H. C. Hawkins, Cleveland, Ohio.
Printing Office, Hannibal, Mo.
A. Solmens, Hat Manufactory, So. Norwalk, Ct.
Lake Shore & Mich. So. R.R. Shops, Elyria, O.
Index Printing Office, Evanston, Ill.
Republican, Johnstown, N. Y.
Tribune, Salt Lake, Utah.
Alton Printing Co., Alton, Ill.
A. F. Worthington & Co., Cincinnati, Ohio.
Lemon & Co., Waverly, N. Y.
Braun & Jones, Cedar Rapids, Iowa.
Gates, Douglas & Co., Cedar Rapids, Iowa.
Village of Rutland, Rutland, Vt.
W. L. Randall, Chicago, Ill.
A. J. Stoll, Sandusky, Ohio.
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R. Putnam, Chillicothe, Ohio.
N. Shelton, Omaha, Neb.
H. J. Lewelling, St. Helena, Cal., and others.

Do not fool your time away trying other Motors, but send for the Tuerk Motor, which is warranted to do better work with less water than any other Motor or Water Engine made.

Send for Catalogue, and state what you want to run,—give full particulars and Water Pressure per square inch.

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BOTANIC GARDENS.

We take the following extract from "Hasty Notes on Trees and Shrubs of Northern Europe and Asia," by Charles Gibb, Abbottsford, Quebec:

"Europe may well be proud of her Botanic Gardens. The large outlay of the European Governments seems to have been money well invested. Botany in its relations to Agriculture, Horticulture and Forestry is a science deemed too valuable to be suffered to remain untaught. Russia is in no way behind in this matter. At St. Petersburg what cannot be grown out of doors must be grown within, thence they have there the largest number of species under glass in the world. Not only in the larger cities, Moscow, Warsaw and Kiev, but in the smaller towns like Kazan, Voronesh, Orel and Penza (the last not visited by us), we find Botanic Gardens such as we might feel proud to own.

A generation or two ago, when Loudon and Lindley were at work in England, the Royal Horticultural Society imported from all parts of the world the plants likely to be useful or ornamental in England. They sent agents to China. Robert Fortune, however, spent much of his time at Canton, almost in the tropics. He was not in search of plants suited to the climate of Quebec, and yet some of our best hardy shrubs were brought to light at that time. This was probably the age of greatest Horticultural interchange the mild temperate regions have ever seen, and upon it is largely based their present advanced horticulture; and yet this work has been only of minor use to us.

In the tropics, and in the sub-tropical climates, the British Colonies have taken the lead in this matter of Botanic Gardens: wherever there is a Colony of any size there almost always is a Botanic Garden. Ceylon, India, (several), Singapore, Hong Kong, Queensland, Victoria, South Australia, New Zealand, Tasmania, Mauritius, Cape of Good Hope, and many others which I am not sure enough to note have their Botanic Gardens. Also in the West Indies, Jamaica, Trinidad and Demarara. The East and West Indies have interchanged for over 100 years! Read the reports of the Jamaica and other Botanic Gardens in the library of the Montreal Horticultural Society, and you will see that it is this botanic interchange which has built up the enormous export trade of the Tropics.

Now there are two points to which I wish to draw special attention.

I. We in the cold north have hardly begun to exchange with our like climates in the old world.

II. In Canada we have no Botanic Gardens.

As to exchange with our like climates, that will begin next fall. As to Botanic Gardens we must speak less hopefully. Our Horticultural Societies have done good work. Our Universities do not neglect the science of Botany. We have some fair collections of trees, some Horticultural Gardens; but our Government has never seen the need of expenditure upon Botanic Gardens, as have the Governments of the European powers, and the Governments of other British Colonies. That this great Dominion of Canada, which stretches from the Atlantic to the Pacific, should be without a Botanic Garden, or a series of such gardens, is a fact without parallel in British Colonial history.

On the European Forestry plantations I must say a few words. The planted districts in France we did not pass through, but we obtained some idea of their method of work by visiting the Forest School at Nancy. That work one may get some idea of by reading their reports now in the Montreal Horticultural Society's library. In Germany we were continually passing extensive plantations of Scotch Pine (*Pinus silvestris*), bordered with Norway Spruce (*Abies excelsa*). The Germans are most economical in the use of wood, so that pine so extensively planted must ere long become an article of export. But where are the hardwoods needed for a thousand different purposes. Strange this exclusive planting of one species. So well are the forest plantations of Wurtemburg cared for, that the term "high culture" could with justice be applied to them. Evergreens are easily and cheaply propagated in the climate of Germany, and hence the method of planting adopted is that of close crowded planting, which of course, neccssitates continued thinning.

In Russia the Government controls, in fact "works," a large proportion of the forests of the Empire. Of natural and planted forest the Government held in 1878 what is equal to 351,780,000 acres, exclusive of Siberia, besides about 51,590,000 acres of scrub at the far north. In 1878 they received from these forests an income of 10,648,000 roubles, and expended on new plantations, and working expenses, 6,400,000, leaving a profit for the year of 4,248,000 roubles, or about $2.124,000. The extent of the plantations in Russia I cannot state. I known, however, that in three of the Steppe Governments in Southern Russia, 22,880 acres have been planted within the last eight years. There are 762 forest stations under the charge of a like number of Foresters, and as we journeyed over the prairie regions of Russia, we were continually coming across some Forestry Station wtih its surrounding plantations. Like the beet sugar factories they are scattered all over the otherwise treeless plains. Unlike the plantations in Germany the Russians have planted not only their native forms of the Silvestris pine and Norway Spruce, but largely of Pedunculata oak, ash and basswood, and somewhat of larch, birch and poplar; also in the Southern Steppe regions, yellow locust, maple, elm, honey locust and others.

HOW FORESTS CHANGE.

It is only in what novel-writers call "the depth of the primeval forest" that a fair opportunity is afforded of studying the mixed growth of our woodlands, and of observing the changes which take place as one generation of forest trees succeeds another. Such opportunities are comparatively rare in the Eastern States at present. Much of the most valuable standing timber in New England to-day is to be found upon land that has one or more times been cleared or cut over. It is therefore generally of few varieties and nearly uniform age. But if we penetrate a virgin forest beyond the devastation of the woodman's axe and the fire which follows his track, we shall find it made up of trees in every stage of growth and of every variety indigenous to that section of the country. We will find hemlocks and spruces centuries old, their branches veiled with long pendents of gray moss, towering high above the hazel and moosewood. Rarely is there the monotony of a single growth. Evergreen trees mingle with deciduous. Sunshine and shadow alternate. Now we are in a comparatively clear spot where the leaves overhead are only thick enough to fleck the ground beneath with shadow; a moment later and hardly a ray of light can penetrate the curtain overhead. Alike on the dry, stony ridges, and in the soft, moist earth of the valleys the growth is mixed. Hemlock, spruce, pine, birch, willow, maple, poplar, oak and many other varieties are intermingled with a seeming irregularity that leads us to wonder how all these varieties with so widely diverse requirements as to soil and other conditions, can flourish in such close proximity. Yet all is easily explainable if we but understand the unfailing care with which nature provides for the wants of all her children.

All through such a forest we will find at intervals the prostrate wrecks of what were once monarchs of the forest. Sometimes these have abdicated their sway by reason of their own weight and the decay of old age, sometimes their lofty heads have been laid low before the power of the nihilist wind. The latter catastrophe occurs most frequently where a thin layer—two or three feet—of rich vegetable mould overlies a coarse, loose gravel. The roots of the trees which spring up upon the rich soil above are repelled by the cold moisture of the gravel beneath and spread out for some distance around without striking deeply in. Then comes a tremendous storm, and the tall hemlock or pine is overthrown—literally torn up by the roots, bringing with them several square rods of the dark, rich earth with which they were covered. The gravelly sub-soil is thus left exposed, and there the seeds of birch, willow and maple, carried by wind, bird, or squirrel, will flourish. The dirt carried up by the roots will sink down, as the tree decays, into a knoll that will mark the death of the monarch for ages, and on it will spring up cherry, poplar and sumach. Thus, side by side, will be a marked variation in types. Not only this, but where the tree fell it swept down smaller trees and underbrush along with it, admitting warmth and light to soil which the sunbeams had not perhaps touched for centuries. In this manner the climate of that particular spot would be as much altered as the soil, and the final result might be an almost complete alteration of the character of the forest at that point. All this, too, would be accomplished by the orderly working of natural laws.

Again, on sandy plains, where the fire that destroyed the forest growth at the same time consumed the vegetable mould that gave the soil its fertility, it is curious to note nature's method of recuperating from the injury. The first step towards re-establishing a forest is made by the pitch pine or similar trees which require but little moisture. These send down their long roots, ten, twenty or thirty feet through the loose, barren gravel, to find and bring to the surface the potash and other soluble salts that are required. These elements are taken up by the tree for its own nutrition and then returned to the surface soil by the falling leaves. Thus the earth is gradually enriched and in the course of time becomes capable of supporting beech, poplar and oak again, and thus nature herself repairs the damage that the ignorance or carelessness of men inflicts upon her.

On the other hand equal provision is made for those trees which do not love the black, loamy soil, but prosper upon a poor and sandy home. Just as the surface of the plains is gradually enriched by the elements brought up from a depth, so is silicious sand from some distance below deposited upon the surface of bogs and swamps, and enables trees to thrive there which could not otherwise find a home. Everyone who has noticed with care the cultivated lands of New England has observed that where hemlock trees have fallen and decayed the soil is exceptionally poor—so much so that often, after several ploughings, the outline of the tree can be traced by the poorer growth of grass or grain, and the sorrel and coreopsis, which abhor a fertile soil, thrive there. If the decaying wood be pulverized it will be found gritty, and grains of sand can be detected with the naked eye. These are crystals of silex taken up in solution into the circulation of the tree, and on its death reverting to their crystalline form. They are evident to workers of wood because they dull the edges of their tools. Now, just this silicious matter is what is wanted by various deciduous trees, some of which cannot live upon a wet, peaty soil. Therefore, if a hemlock, spruce or pine be uprooted from such a soil, its very trunk decaying will supply a foothold for hazel, willow, and yellow and white birch. As these grow in strength they will send down roots inside the bark of the fast decaying evergreen, which, piercing the damp mould will lay firm hold upon the sandy subsoil. Finally, the trunk of the fallen tree will waste entirely away, and there the observer will find the birches growing, on soil so wet and rich that they could never have taken root there but for the death of the tree that gave them birth.—*Lumber World.*

MANAGEMENT OF BURNED FORESTS.

At the Forestry Congress in St. Paul, a paper by B. E. Vernon was read on this subject. In the management of a burnt forest, the essayist showed it is necessary to study the influence of the fire on the soil and on the standing timber before deciding upon the treatment. The vitality of the timber left standing may be injured by the scorching flames. In hardwood forests where the reproduction is expected from the stocks, as in the coppice, the reproductive power is injured in proportion to the degree of heat developed by the fire. In pineries, where reproduction can only be expected from the seed, the young seedling falls the first victim to the merciless fire. When the fire kills its original growth or causes its speedy death, the conditions of forest growth are at once changed and those alternations of species occur, which are the natural consequence of the change of their conditions. The essayist went on to shew how, in the case of a destroyed pine forest, the light-seeded species first takes the place of the old growth. Gradually, however, acorns and nuts will be deposited in the shade of the new growth, and as the light-seeded trees die off, the more valuable trees get a chance to grow and gradually occupy the lands. This new forest of hardwood trees if protected by fire will long occupy the ground, but the original pine forest will not appear again until the land, long enriched by an annual deposit of leaves, has been again stripped of its trees and ploughed by years of cultivation. The forest fire, then, which destroyed the original pine forest, also destroyed the capacity of the land to reproduce a similar crop of trees for a period which may be set down at from 50 to 100 years.

The essayist showed from this the importance of protecting the forests by dividing them into blocks, for instance, by means of avenues from two to six rods in width. Where the risk of fire is caused by the proximity of a railroad, safety belts along the endangered line are recommended. Where forests have been partially destroyed, various measures are recommended according to the character of the forest. Where the destruction of heavy timber is a total one the wisest plan is the immediate replanting of the land. Dead trees should not be allowed to remain, as they form the very best opportunities for the development of injurious insects. In forests of deciduous trees, where the heat generally is not as intense as in pine woods, it may be a cheap plan to await a new growth from the stocks and carefully nurse the more valuable species, in time filling up the bare spaces by planting shade-enduring species. In this, as in every other problem of forestry, it is impossible to prescribe any definite rules that will cover all the requirements of particular cases. A thorough elementary knowledge of the conditions of forest growth alone will enable the forester to decide what methods to adopt for the restoration of lost growths and reparation of the damage inflicted by fires on the soil and the forest.—*Lumber World.*

THE MARKET IN ENGLAND.

James Smith & Co.'s *Woods Circular and Prices Current*, dated Liverpool, 1st September, says, under the head of "Colonial woods:—" Yellow pine is arriving freely, chiefly on timber merchants' account. The only sales reported have been of wanny board, 20 inches average at 2s 3d per foot for second quality and 2s 6d to 2s 8d per foot for first class, G. F. A. Square at 21d per foot for 50 feet average. Of Newfoundland pine a cargo has been sold at 13d per foot. Red pine, of good size and quality, is in fair demand. Oak is only in moderate request, save for long lengths: a few orders are in the market, but this wood is much interfered with by the scantlings from the States. A parcel of 65 feet average, mixed quality, is reported sold at about 2s 8d per foot ex quay. Elm is in good demand, especially for prime fresh wood; large average has been sold at 2s 3d and small at 2s per foot. Ash is wanted, and has been sold at from 2s 4d to 2s 5d per foot. Hickory is quoted at from 2s 2d to 2s 6d per foot. Black Walnut continues to arrive freely from the States, and prices are lower. Birch is in fair demand, and has been sold at 17d per foot for Dalhousie, 14½ inch average, 2s per foot for Quebec, and at auction 1128 logs from Pictou were offered, and realized from 14¼d to 17½d per foot, and 394 logs from Campbelltown, realized 16 per foot. N. B. and N. S. Spruce Deals: The import has exceeded that of last year by 3333 standards, and, as there has been a smaller consumption, stocks have increased and prices have fallen, while there is a strong feeling among buyers that prices will be still lower. Sales in the early part of the month ruled at £7 2s 6d per standard for St. John, and £6 15s to £7 per standard for Miramichi, Halifax and Musquash; latterly prices have been accepted at fully 5d less per standard. By auction the cargo, ex Mark Twain, from St. John, averaged £7 os 6d per standard, and several other cargoes were only partly sold. The cargo ex Canada, from Bathurst, averaged £6 13s 7d per standard for 3 inch spruce, and £6 18s 9d for 2½ inch, the scantling bringing £6 4s 1d per standard. Yesterday by auction the cargoes, ex Director from St. John, averaged £6 19s 6d; ex Moss Glen from St.

John, £6 17s 6d, and ex Strathmore, from West Bay, £6 18s 9d per standards. Pine deals from Bathurst, ex Canada, have been sold at auction at £8 10s for 15 inches and upwards, but most of the parcel was withdrawn. Richibucto have been sold at £7 per standard, c. i. f., and Dalhousie 1sts at £8 15s, 2nd at £5 12s 6d to £7, and 3rds at £5 7s 6d to £6 10s per standard. Quebec pine deals—1st and 2nd quality are scarce and 3rds are not so readily sold, having come forward more freely; 4th quality have been sold at £7 per standard. The late sales have been at auction of 2nds at £14 15s and 3rds at £9 per standard c. i. f., and 3rd Bright at £11 2s 6d for 12 inches and upwards, and £8 15s to £9 12s 6d for 11 inches and under. Red pine deals have been sold at £8 10s to £9 per standard. Quebec staves are dull of sale and stocks of all kinds are excessive. Palings are in good demand, and spruce have been sold at 42s 6d for 45x3x3¾ inch, and at 97s 6d for 4 to 6 feet 3x1, and pine palings realized 115s for 4 to 6 feet x3x1 inch. Laths are but seldom inquired for.

READY MADE HOUSES AGAIN.

The *Northwestern Lumberman* says if there is an industry of especial consequence which is not prosecuted in the great enterprising state of Maine it is yet to be heard from. In the matter of ready-made houses the down-easters are abreast with the times. The Kennebec Framing Company is the name of a corporation in this line of business, at Fairfield, which is called the largest in existence, but pride may have got the better of judgment in the estimate of size. Regarding the enterprise the Bangor *Mining and Industrial Journal* has the following: "Dwelling houses are made like boots and shoes, in any quantity or of any size or style, and for any market in the wide world. Not long since this firm received a single order for 50 houses for Cape May, to be delivered speedily and in complete finish. These houses were not to be sheds, nor shanties, but regularly ordered dwellings, and they were made accordingly, and so delivered, and contain hundreds of occupants at this moment. An order will be received for a $50.000 hotel, or an ornate French roof cottage for a fine country estate, and these are as easily and expeditiously furnished as an ordinary boarding-house for a country village or a barn for a ranch in Kansas or Colorado. It is not to be supposed that only a coarse, rough frame is thus sent out, to be trimmed into shape on the spot where it is delivered. On the contrary, the house is complete when it leaves the factory, and as ready to go together as is a musket when it leaves the armory in Springfield; all the parts being found, even to the knobs for the doors, and the screens and shades for the doors and windows, according to specifications. Great trains of freight cars stand waiting about, and are freighted almost daily here. The refuse trimmings and edgecuttings of the lumber are carted off to a neighboring pulp mill, and there speedily turned into material for paper, or other products. Machinery for almost every conceivable use in connection with wood is at hand, and house materials, of any kind, or size, or shape, seem to drop out like meal from a hopper. In a recent instance, where a large building was furnished for a southern order, the parts were thus made, and when put together in the city where the building is now standing its length was found to vary not the eighth of an inch from the original specifications, although its length on the front numbered hundreds of feet. Every inch of this building, from the sill to the last shingle, was sent ready prepared from the factory, and 'set up' as readily and almost as quickly as a nail cask."

THE WOOD-LOT IN WINTER.

A few acres in trees is one of the most valuable of a farmer's possessions; yet no part of the farm is so mistreated, if not utterly neglected. Aside from the fuel the wood-lot affords, it is both a great saving and a great convenience to have a stick of ash, oak, or hickory on hand, to repair a breakdown, or to build some kind of a rack or other appliance. As a general thing such timber as one needs is cut of, without any reference to what is left. By a proper selection in cutting, and the encouragement of the young growth, the wood-lot will not only continue to give a supply indefinitely, but even increase in value. A beginning, and often the whole, of the improvement of the wood-lot, is usually to send a man or two to "brush it", or clean away the underbrush. This is a great mistake. The average laborer will cut down everything; fine young trees, five or six years old, go into the heap with young poplars, and the soft underbrush. The first point in the management of the wood-lot is to provide for its continuance, and generally there are young trees in abundance, ready to grow on as soon as given a chance. In the bracing winter mornings one can find no more genial and profitable exercise than in the wood-lot. Hardwood and useful young trees should not have to struggle with a mass of useless brush, and a judicious clearing up may well be the first step. In timber, we need a clean, straight, gradually tapering and thoroughly sound trunk. In the dense forest nature provides this. The trees are so crowded that they grow only at the upper branches. The lower branches, while young, are starved out and perish, the wound soon healing over are out of sight. In our open wood-lots, the trees have often large heads and the growth that should be forming the trunk is scattered over a great number of useless branches. Only general rules can be given in pruning neglected timber-trees; the naked trunk, according to age, should be from one-third to one-half the whole height of the tree; hence some of the lower branches may need to be cut away. All the branches are to to so shortened in or cut back as to give the head an oval or egg-shaped outline. This may sometimes remove half of the head, but its good effects will be seen in a few years. In removing branches, leave no projecting stub on the timber, and cover all large wounds with coal-tar. Whatsoever works in this manner thoughtfully can not go far astray.—*Ex.*

TIMBER FOR HUBS.

The *Hub* gives the following advice regarding the getting out and preparing of timber for wagon hubs:

"Cut the hub timber in months when the sap is down and the bark is tight. Cut the ordinary butt lengths, say four or five feet; remove the outer bark or ross, from the center of the sticks, leaving a covering of rough bark at the extreme ends. Sticks prepared in this manner should be cross-piled under dry sheds, where there is a good circulation of air. After drying in this manner for nine months or one year, according to sizes, the sticks can then be sawed into hub-blocks, which have each end dipped into an elastic cement, made by melting resin to which is added sufficient grease to temper it. A hole should also be bored through the heart of each block. Prepared in this manner they will soon finish seasoning, or they can be forced in heated rooms, without danger from checking. Steaming the blocks to hasten the seasoning is practiced to a considerable extent, and, many claim, without injury to the fiber of the wood; but we not recommend it, as some of the substance is dissolved by this process, and as the hub plays such an important part in the wheel it is necessary to preserve all the natural qualities of the timber.

The Big Raft.

The *Lumberman's Gazette* says the big raft towed from St. John, N. B., to New York, of which the particulars were given last week, contained more timber than we estimated. It consisted mainly of piling and contained 3,300,000 feet, It was therefore entitled to more respect then was paid to it. Some 75 tons of chains were used in binding the timbers together. A good saving in the cost of transportation was made, but the risk will probably stand in the way of the experiment being often repeated.

If you would escape the ravages of that scourge of the summer season, Cholera Morbus, keep Dr. Fowler's Extract of Wild Strawberry at hand for use. In that and all other forms of Bowel Complaint it is infallible.

THERE is no excuse for suffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why suffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

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REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

$500 Reward!

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C WEST & CO., "The Pill Makers," 81 & 83 King St East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w4dd12l22

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PUBLISHED SEMI-MONTHLY BY

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., OCT. 1, 1883.

IT has been decided by the United States Courts that hemlock bark is not dutiable under the new tariff.

SPRUCE timber cannot be all extinct in Maine, as over $130,000 worth of spruce gum was produced in the Pine Tree state last year.

THE late log jam in Wolf river, above the Bay boom, is said to have cost the owners $5,000 in damages for the stoppage of navigation.

LUMBER is fast going out of the piling grounds at the Chaudiere. Not ten per cent of the American barges there last month remain there now.

LARGE gangs of raftsmen are being despatched daily for the lumber shantics, During the past week about 1,000 have left Ottawa and suburbs.

BROWNLEE & Co, of Detroit, have obtained a contract to furnish 5,000 poles to the new postal telegraph line between Detroit and St. Louis, Michigan.

CANAL lumber freights from Buffalo and Tonawanda to Albany last week were $2.40 a thousand, and to New York $3—the highest points reached this season.

F. R. HULBERT is getting out 600 cords of poplar on Drummond's island, Lake Huron, for a paper firm at Niagara Falls. He has 4,000,000 feet of pine on the Island to cut.

THE Ottawa *Citizen* says that the shareholders of the Algoma Lumber Co. have met in that city for organization. The company is composed of some of the most energetic lumbermen in the Ottawa Valley.

ADVICES for the week euding Sept. 15, show that the sawn lumber market has taken a decided change for the better. Several prominent New York merchants have been in Ottawa and the purchases are said to have aggregated eight millions of feet, principally comprised of the higher grades. An advance of 25 cents per thousand feet is quoted in these qualities.

EXTENSIVE forest fires are reported as having raged in eastern and northern Maine, in New Jersey, Massachusetts, Maryland and Virginia. Michigan is getting into condition for a visitation, and special precaution should be exercised.

THE receipts of lumber at San Francisco for July were 36,528,184 feet, of which 13,367,960 feet were redwood, 20,813,498 pine, 1,694,002 spruce, 580,517 cedar, and 72,207 hardwood. The amount of shingles received for the month was 14,362,500, and of lath 4,011,600.

A NEW method of binding shingles has been invented by Wm. Newson, of Manistee. It consists in the use of a wire of the same length as the common brand, chisel-pointed at each end, and bent at an angle of about 20 degrees, and notched to prevent drawing out.

A QUEBEC correspondent says:—Messrs. Dobell & Co., of Quebec, have purchased from Messrs. Barnard & Mackay, of Pembroke, a raft from Nipissing, white pine, comprising some 240,000 feet. The price is believed to be about 29½ cents, but the actual cost has not transpired.

THE Brandon *Mail* of Sept. 18th, says:—Mr. McLaren and Mr. Chistie, lumber dealers of this city, to-day purchased the entire old season's cut of spruce lumber from Shields & Co's saw mill, consisting of over a million feet. The price paid was in the neighborhood of $50,000.

AN Ottawa despatch says:—Eighty-four men have left for Mackinaw to work for an American lumber company. They were hired for $16 per month and board. Another gang will leave in a day or two for the Diamond Match Company, at wages averaging from $18 to $20 per month.

IN the three rafts to be towed from French Bay for the Collins Bay Rafting Company, there is 480,000 feet of timber, or equal to 30 vessel loads. If the tow schome succeeds, vessels will suffer. In each raft thore is used forty tons of chain, so that they are able to stand tossing about.—*Mail.*

THE publishers of the *Farm, Field and Fireside*, Chicago, are meeting with great success in securing subscribers to their publication. In addition to furnishing an excellent paper at the low price of 50 cents for six months, they propose to distribute $10,000 in presents to their readers. See their announcement in advertising columns.

WHEN Cobb & Mitchell, of Cadillac, Mich., received a telegraphic order for timber for a temporary bridge on the Grand Rapids & Indiana railroad, they stopped other work, sawed 30,000 feet for the bridge, and loaded the lumber on cars in one hour and 30 minutes. That was sawing "on order" and doing it quickly.

ADOLPH LEITELT, of Grand Rapids, Mich., is president of a new corporation that owns Cockburn island, at the head of Lake Superior. The name of the company is the Cockburn Island Timber Company. About forty men will be employed on the island the coming season, getting out telegraph poles, ties and pulp wood.

BRY & HORN, of Frankfort, Ky., have since last March shipped about 2,500 walnut logs to Berlin, Germany, for manufacture into veneers. The logs contained about 680,000 feet of an average value of $55, and amounting to about $37,000. The cost of transportation amounted to $15,000 on the lot. The rate from Frankfort to New York is $85 a car.

THE steambarge Oakland, lumber laden and bound from Bay City to Erie, Pa,, on September 17 water logged in Lake Erie, during a storm, and foundered, She had on board 350,000 feet of lumber belonging to Carroll Brothers, of Erie. All but four of the crew took to a boat and reached Connaut harbor in safety. The men that preferred to take their chances with the wreck were lost. The Oakland was one of the oldest boats on the lake and was valued at $10,000.

ALEX. MCKAY, of Ottawa, Ontario, and a party of timber lookers have been into the Lake Winnipeg region, particularly in the Bearing river district. They report plenty of spruce. but were surprised at the small amount pine found there. Mr. McKay has a 50-mile limit on Bearing river. The stream is rapid and rocky, but can be driven.

THE *Commercial Bulletin*, of New York, predicts that it will not be long before the lumber business of the South will amount to $100,000,000 per annum. The growing trade with the North in the yellow pine lumber alone sustains the calculation, and with all the other varieties of timber there that will surely be drawn upon heavily, the *Bulletin* has, we think, made a safe prediction.

THE *Northwestern Lumberman* says:—At the state land sale at Madison, Wis., lately, the average price realized was $3.60 an acre. Lumbermen of the Chippewa Valley formed a pool and bought a large amount of good land in Sawyer county, and it is said that they will clear $50,000 by the deal. The greater portion of the lands sold in Ashland, Bayfield, Chippewa, Douglas, Lincoln, Price, Sawyer and Taylor counties.

R. A. LABREE, formerly of Gardiner, Me., put in a saw mill at Jacksonville, Fla., about two years since, and added a box-cutting machine, and finally a new boiler and engine. During 1882 he shipped $60,000 worth of boxes to parties along the river. It was found difficult to obtain steamboats for this purpose, and after suffering inconvenience for two years Mr. Labree has built a boat of his own, that can carry 10,000 boxes—the daily product of his mill—and run near enough to the shore to discharge the cargo in shallow water without a dock.

THE McKellar correspondent of the Parry Sound *North Star* says:—Messrs. S. & J. Armstrong are making preparations for an extensive seasons work in the lumber woods this winter. Wm. Little has already started one camp for this firm, and they intend starting four other camps immediately. They have contracted with the Parry Sound Lumber Company to get out and drive eight million feet. They have also a contract to get out and drive two million feet for the Midland and North Shore Lumber Co. This will give employment to a large number of men and horses.

PRESERVATION OF FORESTS.

At the instance of the Government of the Province of Ontario, an exhaustive report upon the necessity of preservation and replanting forest, has just been compiled by Mr. R. W. Phipps, of Toronto. The subject is one in which increasing interest is being shown in the Dominion, and the report in question deals with it very comprehensively. The writer first calls attention to the vast wealth the Province originally possessed in its forests. When the paddles of the Frenchmen first broke the waters of the Toronto bay, he remarks, Ontario, from the Detroit to the Ottawa, was under the roof of the forest, and contained, in the opinion of one of the best qualified judges of the United States, perhaps the most valuable masses of timber which ever existed in a region of its size. Pine, maple, beech, ash, and white oak were possibly most prominent, but hickory, hemlock, ironwood, and the silver birch were scarcely less abundant. The early settlers, however, directly after arrival, began the work of destruction with a ruthless hand. They required the land, and there was no demand for timber. Hence square mile after square mile of forest was destroyed dy fire—a process which went on for years, and which has been followed up by the operations of the lumbermen. The result is that the cultivated portions of Ontario will speedily become almost denuded of trees, while the lumbermen are compelled now to go great distances for the superior quality of pine which they used to get much nearer home a few years ago. Apart from any considerations as to the future of the lumber trade which it may suggest, this state of things is obviously of much significance to the agriculturists; and it is chiefly this aspect of the matter which is discussed in Mr. Phipp's report. The consequences are, indeed, likely to prove so serious that, in the opinion of the writer, the whole of Ontario is in great danger of heavy loss, unless action be taken in time by the authorities. At the close of a somewhat elaborated enquiry, the report recommends the preservation of the higher lands in forest, and the aquisition and replanting of such lands where they have been already cleared; economy in utilization of the great forest in the north-eastern and north-western portions of the Province; the adoption of adequate measures for protection against forest fires; and lastly. the planting of trees, as "wind-breaks," on highways and the dividing lines of farms. By these means it is thought the climatic influence of the forest may be preserved, and the lumber supply &c. maintained in perpetuity. What action the Ontario Government may take on the strength of the recommendations is not yet known, but their appreciation of the importance of the subject is shown by their authorizing the gratuitous distribution of a large number of copies of the report among the farmers of the Province.—*London Times.*

FOREST DENUDATION.

The effect of the operations of the lumbermen in the woods upon the rainfall, etc., is often discussed as though the writers believed that in lumbering operations the forests were utterly exterminated, all the trees being felled and the underbrush cut leaving the land a barren Sahara. This, of course, is an absurd view, for it is seldom that more than one-half the trees on the best tracts are worth cutting, and trees are not felled for pastime or because the loggers have nothing else to do. A great cry has been raised against the lumbermen operating in the forests of the Adirondacks, and dire results have been predicted. A tourist, however, exposes the absurdity of the fears, showing that the outcry is void of good sense and knowledge of the real condition there. He says truly that only pine, spruce and cedar are now cut, because the coniferous woods only will float down the streams to the mills, and no logs of less than 27 to 30 inches in circumference are marketable. The result is that the lumbermen takes, on the average, 10 or 15 of the largest and most mature trees from an acre. Is it not better that those mature trees should be utilized by the present generation of men, than that they should fall and decay uselessly, except to generations of trees that may revel in their elements a hundred or a thousand years hence? When this subject was discussed in the New York legislature last winter, a trustworthy expert stated that if he could take the whole assembly over the Adirondack region in a balloon, not one in fifty of the members could tell where the lumbermen had cut all the saleable trees and where he had not. He was right. None but an expert, and one, too, who had viewed the premises before the despoliation could tell; and then only by missing the black tops of the spruces.—*Ex.*

A LUMBER CENTRE.

We find the following in the Chicago *Northwestern Lumberman*:—The *Lumberman* has heretofore called attention to Selkirk, or East Selkirk, Manitoba, as probable to be the most important lumber manufacturing and market centre in the Canadian Northwest. It has based this prophecy on its situation on the Red River of the North, a few miles from its outlet into Lake Winuipeg. Thus it is the gateway through which must pass the untold millions of feet of lumber and timber yet to be derived from the forests that hover along the hundreds of miles of shore inclosing the great northern lake and the lower Saskatchewan. Cedar, and other lakes, and rivers tributary to the major waters, The vast prairie territory to the west and south makes it necessary for this wealth of timber in the Lake Winnipeg region to be manufactured and distributed: it will be an inevitable result of the settlement of the country. We have received a pamphlet from officials of East Selkirk that sets forth some features of the manifest destiny of that point, which include the lumber business. The shipping interests of the place are mentioned as follows: At Colville landing. the port of East Selkirk, the wharves are usually piled up be-

yond their capacity with cordwood, shingles, lath, ties, and other products of the extensive mills of Lake Winnipeg, while the spacious warehouses of the Hudson Bay Company are all filled to overflowing with goods ready to ship to Prince Albert, Edmonton, and other points on the Saskatchewan river, as well as to various ports on Lake Winnipeg and Lake Manitoba. The Red River at East Selkirk is wide and spacious, entering Lake Winnipeg a few miles below, and here is the best harbor on the river, it being commodious and accessible. Nineteen steamers now run out of this harbor to the various ports on the navigable waters to the north and west. East Selkirk is also now quite a railroad centre, having a line of the Canadian Pacific running to Rat Portage and Thunder Bay, and a branch from Winnipeg, and another branch from Winnipeg on the west side of the River is being built. The facilities for reaching Selkirk thus being furnished by the Canadian Pacific Company show how important that corporation regards it as a shipping centre. It is needless to say that the citizens of the place have great expectations, and already are comparing their destiny with that of Chicago, the criterion of all modern urban growth. In this case, however, they do not reckon wholly without reason, as other places have done. If their locality did not hug the north pole quite so snugly their would be no question but that Selkirk is a future great city.

KEEWATIN DISTRICT.

From our own Correspondent.

VERMILLION BAY, Sept, 10.—This lively little village was further enlivened last week by the hum of the new circular mill of Messrs. McDonald & Shields, which then commenced regular operation on several acres of logs lying in this beautiful bay of Eagle Lake. There is about 3,000,000 feet of stock, nine-tenths of which is red pine of excellent quality. The engine and machinery is from the shops of Wm. Hamilton & Co., of your good town of Peterborough, and it works admirably. The amount of logs obtainable at this point not being large and being generally of moderate size, business economy suggested a mill in character with its work. A 54 inch saw, of number 8 guage, is run with a pony carriage of a new and improved pattern with steam fud engine, 16x20, supplied with steam by two 4x14 feet boilers. The cutting capacity is limited only by the strength of the saws, a No. 7 guage would be better in this firm red pine. The convenience of the carriage makes up for the slight deficiency of the saw. One man performs all the operations on it with ease, and so quickly that generally not a second is lost in rolling on or canting. Though this mill is well arranged for cutting and disposing of lumber for the present, at least it is defec ive in regard to the disposition of the refuse. Complete machinery for this purpose is a necessity in this country of high wages, and is the true economy.

The mills at Keewatin village are deficient in their supply of water, the lakes being unusually low. The Winnipeg Lumber Co.'s new mill at Rat Portage is not exp ected to start this season. Their two mills in Winnipeg have lately started on the stock carried over from last season, their new cut of logs having not yet arrived.

Mr. Sprauge's mill at Winnipeg lately cut 51,000 feet in 11 hours, at one time of the day 1,100 feet was cut in six minutes, no doubt the logs were selected, but this is good cutting for a single circular in red pine and is another score for Wm. Hamilton's manufacture.

Mr. Wm. Tait, formerly of Gravenhurst, keeps the Sutherland mill active throughout the season. Building operations have slightly improved and the labor market is better equalized than formerly.

HEMLOCK AND PINE.

The Warsaw Wis., Correspondent of the *Northwestern Lumberman* says:—There are other important facts in connection with the question of the timber supply to be considered. Hemlock, the coming lumber, grows in such abundance along the Wisconsin river as to be beyond estimate, and its quality is of great excellence. There are those who believe there is nothing so suitable for piece stuff as hemlock. Until quite recently but little attention was paid to hemlock, but latterly certain operators have put in 1,000,000 feet, or thereabouts, with their other logs, and they will gradually increase the amount. To what do these facts point? That while the rate of lumber production is very certain to increase year by year, the proportionate amount of pine consumed is likely to decrease in a few years. The nearer the owners of stumpage and mills approach the end of pine, the greater will be the effort, it is reasonable to suppose, to husband the resources. Necessarily a continuing demand must spring up for hemlock, and as much as possible of that timber will finally be icut to spin out the pine. Why then, should there not be considerable fair pinc to cut 20, or even 25 years from this date?

In discussing the life of the pinc supply theorists usually take the ground that the timber will be cut at an increased rate so long as a tree stands, and it might be inferred that the haste of the manufacturers to saw the last log would be so great and such their blind recklessness, that on the last season of the waning supply, they would prepare to put in twice the amount of pine that was left standing. There is no shrewder class of men than the lumberman, and they may be relied upon to look out for their own interests. When the pine is really on its last legs no one will discover it sooner than the men who own it. There seems to be reckless consumption now, but the fact is there is so much pine that the manufacturers have not begun to be scared. There is reason to believe that the efforts at annihilating pine will be tempered with moderation as fast as wisdom may suggest. No one can say at what time the Wisconsin forests will be bare of pine, and it is to be expected that certain parties will reserve virgin tracts for a number of years, not allowing the timber to be cut, and holding it for its future value, so that more or less good pine will be left for other generations. Neither is all the good pine owned by the mill men. A Stevens Point man having 250,000,000 feet is one of the heaviest owners, and the larger part of the timber is said to be owned by parties outside the state.

Burglaries.

The Midland *Free Press* of Sept. says on Sunday morning last, the office of the B. C. L. and T. Co., was entered, and the books of the Company were taken. A reward of $10 is offered for their recovery. On Sunday night the station was entered by burglars, but before they could secure anything valuable they were frightened off.

Forestry Exhibition.

An Industrial Forestry Exhibition is to be held at Edinburgh next year. The *Courant* says the promoters are making rapid progress with their arrangements. The programme has been completed and the classification of exhibits has been arranged. Promises of contributions exceed the most sanguine expectations. Canada makes a good display at the Fisheries Exhibition in London. No doubt the Dominion will be represented at the Forestry Exhibition.

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THE FORESTS AND THEIR MANAGEMENT.

We take the following from Mr. R. W. Phipps' report to the Ontario Government :

FRANCE.

The administration of forests in France is entrusted to the Ministry of Finance, and the head of the Department is the Director-General, assisted by two administrators, one charged with the management of the forests and the sale of the products, the other with the police of the forests and the forest laws. In the departments there are thirty-two conservaters, each in charge of one or more departments, according to the extent of the forests in each. The immediate supervision is entrusted to inspectors, who are assisted by sub-inspectors and *gardes-generaux*, who live near, and personally superintend all operations and work of the forest guards. The brigadiers and forest guards live in houses in the forest and serve as a police over a certain range. They are required to be present at all operations, and to go round their ranges at least once a day to report any violation of forest law that may take place.

The saw-mills in the forests are usually owned by the Government and hired at a certain rate to the wood merchants, who buy the cuttings. The timber is allowed to be sawn up before it is inspected and marked by the forest guard under the superintendence of an inspector.

The forests under the management of the bureau are (State and Commune) about 7,500,000 acres. There were nearly a million more, which went with Alsace and Lorraine to Germany. Also, there are in France 15,000,000 acres of private forests.

Of schools of forestry, the French have, at Nancy, one of the best in the world, where pupils are instructed both experimentally and theoretically in all forest learning, the collegiate home studies being constantly varied by excursions of pupils, under charge of professors, to those forests where, at the time, most can be learned. Proficiency in these schools forms, of course, a strong recommendation to future advancement in the Government or private forest service. For admission to the school candidates must bring a letter of authorization from the Director-General of Forests, which can only be obtained by those from nineteen to twenty-two, without infirmities, and having a diploma of Bachelor of Letters, or attainments in classical studies to warrant such diploma. They must also have an income of $300 per annum, or a pledge from friends to provide it, and $120 afterwards till employed as garde-general on active duty.

In the difficulties which have hindered the efforts being made, especially in America, to preserve a due amount of forest, one of the most formidable has been the disinclination to interfere with private rights. It will be of service in Canada in this matter to notice how summarily, in France, this matter has been managed. I will therefore quote the principles of law upon which the forest code of France is founded, as stated with great precision by Professor Macarel (a writer deservedly of the highest estimation) in his "*Cours de Droit Administratif.*" As they embrace views applicable to other countries under like necessities—being in fact an extension of the right of eminent domain, or that maxim of Roman law, *salus populi suprema lex*—they will be especially germane to our purpose. He says :—

"*Restrictions Implied in the Free Enjoyment of the Soil.*"

"As to the woods and forests :

"The preservation of forests is one of the first interests of society, and consequently one of the first duties of Government. It is not alone from the wealth which they offer that we may judge. Their existence is of itself of incalculable benefit, as well in the protection and feeding of the springs and rivers as in their prevention of the washing away of the soil from mountains, and in the beneficial influence which they exert upon the atmosphere.

"Large forests deaden and break the force of heavy winds that beat out the seeds and injure the growth of plants ; they form reservoirs of moisture ; they shelter the growth of the fields ; and upon hillsides, where the rainwaters, checked in their descent by the thousand obstacles they present by their roots and by the trunks of trees, have time to filter into the soil and only find their way by slow degrees to the rivers. They regulate, in a certain degree, the flow of the waters and the hygrometrical condition of the atmosphere, and their destruction accordingly increases the duration of droughts and give rise to the injuries of inundations, which denude the face of the mountains.

"Penetrated with these truths, legislators have in all ages made the preservation of forests an object of special solicitude.

"Unfortunately, private interests—that is to say, the action of those who do not directly feel the power of the Government—are often opposed to this great national interest, and the laws framed for protection are often powerless.

"In France, the ordinances prior to the revolution carried too far the restrictions imposed on private owners. The new regulations fell into the opposite extreme, and allowed the proprietors free and absolute liberty to dispose of their woods.

"A large destruction followed this imprudent translation from excess of restraint to excess of liberty. The proprietors abused this unwonted freedom, and clearings multiplied indefinitely, without distinction as to the places where they were made, so that in many localities the rushing down of the denuded soil and the deforesting of mountains caused the soil needed for vegetation to disappear and left the rocks naked. The rise in the price of wood and the easy and certain resources offered to proprietors in the clearing of a planted tract, when compared with the remote and eventual advantanges offered in their preservation ; the hope of compensation, and, beyond this, the advantages, in one way and another, of cultivation, may be recognized as among the causes which sufficiently explain the inducements offered to many of these proprietors, which led them to undertake these clearings."

I would here notice that this is precisely what we have been doing Canada, and that the ill effects which followed in France will surely in no long time be felt in Ontario. They are already felt ; we have not the climate we had, nor the favouring moisture when most needed. Yet we could get along as we are. But that is just what is impossible. We must, while there is time, use some means of averting the evil, or we shall certainly become much worse off than we are. M. Macarel goes on :—

"At length, this progressive deforesting of the soil of France, joined with the incessant need of firewood, and the demand for wood by manufactories and ships, have, during forty years, made sad havoc with our forest wealth.

"A renewal of the ancient prohibitions by the law of 9 Floreal, year XI., was deemed necessary to oppose this excessive clearing of woods by private owners. It was accordingly decreed that, during the twenty-five years dating from the date of the promulgation, no wood should be cut or carried off unless six months' notice had been given by the proprietor to the forest conservator of the arrondissement of the district in which the wood was located. Within this time the forest administration might object to the clearing of the wood, and was charged to refer the question before the end of this time to the Minister of Finance, upon whose report the Government might definitely decide within the same time. It therefore resulted in this, that to make a clearing an authorization precedent by the administration was necessary, and that if the administration thought proper not to grant this, the proprietor was restrained against cutting.

"Thus, according to this branch of agricultural industry, the general law of France is, that owners are free to vary, within certain limits, the cultivation and working of their lands ; but, as to woods and forests, the public interests demand that individuals shall not be free to clear them from the soil whenever they please. From hence it follows, that the administration has a right to pronounce its prohibition against clearing whenever it is deemed that the public interests require that this be done."

The penalties for clearing when forbidden are, I may state, a fine of about $200 per acre, and compulsory replanting within three years. This law was, I conceive, in full force in 1874, as this quotation forms a part of a report to the U. S. Congress of that year. It probably is in force still, and justly so. The voice of the people, not of solitary citizens, should decide in so important a matter as deforestry a country.

The French Government have, at great expense, replanted vast and almost barren districts ; they have also established great forests along the sea shore where formerly the sand threatened to destroy whole departments, and have averted the evil. But the chief means is the prohibition of clearing ; for it is the interest of an owner who does not clear to plant and improve his forest, so as to receive an increased income from the trees arriving at maturity in increased numbers yearly.

SWITZERLAND.

In no country in Europe has the waste of forests been more rapid or destructive than in Switzerland, and in none, perhaps, has this improvidence been followed by more disastrous results. The woods, being considered common property, were uprooted ; and the soil on the mountains being exposed to the wash of the rains, was rapidly carried away, leaving broad areas of naked rock, from which the water would at once sweep down the valleys in sudden and destructive inundations. The autumn of 1868 is memorable on account of these floods.

Public attention has, however, been thoroughly awakened, and active measures are in progress to remedy, as far as may be, these evils. The cantons which have charge of these operations have for some time, at great expense, been constructing works to control the streams, and planting trees wherever practicable.

I would here remark that this is a very difficult matter compared with what it might have been. It is easy to preserve a forest on a hillside, but the soil once washed to the rock, it is another matter. I could point out places in Ontario where splendid forests stood, and yet might have stood, now for many miles

"White rock and gray rock,
Barren and bare."

The matter is now in Switzerland taken into the hands of the national Government, and the following article gives the idea :—

"Art. XXII.—The Federal Union of Switzerland has the right of supervising structures for the protection of water courses, and of the forest police in mountain regions. It will assist in protective structures for water courses, and in the planting of forests at their sources. It will enact the requisite regulations for maintaining these works and the forests now existing."

RUSSIA.

In this vast empire, where, as in the United States, we have been accustomed to believe the forest in interminable, and where, in fact, the amount of woodland in the northern two-thirds is more than twice as great in proportion to its area as in the United States, the Government has turned its attention energetically to the subject of forestry, and has undertaken to establish by regulation conservative measures. As yet, private persons and establishments owning forests enjoy the absolute right to cut and clear at will. But these do not own nearly so much as the Government, which has about three hundred and thirty million acres of wood ; the others holding about one hundred and fifty. About forty per cent. of the country (Russia in Europe) is timbered. I must remark that this amount, after so long an occupation, shows that the timber has been taken some care of already. For the immense Government woods, they have been placed under the care of the Minister of Public Domains, who has a director of the Forest Department, and the organization of the service is very complete. For the purpose of fitting young men for the duties of forest agents and agriculturists, either for the Government service or upon private estates, two special schools of agriculture and forestry have been established—once at St. Petersburg, and one near Moscow. The course of instruction extends through three or four years, and the schools are placed near forests, where every detail is illustrated. There is also another forest school at Lissino, of the second grade, where the course is very practical

SWEDEN.

In 1859 a bureau of Forest Administration was created. Forest regulations, however, extend back to 1647, and even before that, private owners were required to plant and protect from cattle two trees for each one cut.

In 1868 a commission was appointed, under the direction of Mr. E. V. Alinquist, to enquire into the need of further legislation, and in December, 1870, he submitted a report with a bill, making 392 pages, besides numerous tables.

One clause in the reported bill is a compulsory feature, which, though less stringent, is in the spirit of the enactments now in force in most of the countries of continental Europe, namely, forbidding trees to be cut for sale smaller than eleven inches at the butt, or eight inches sixteen Swedish feet therefrom.

(*To be continued.*)

PREPARING LUMBER FOR MARKET.

A correspondent of the *Southern Lumberman*, who evidently understands his business, has the following to say to saw mill men who cut lumber for the eastern market :

We know that trade is dull. We are told of it often enough, goodness knows ; but for all that, even if the market is dull, good stock, *properly prepared*, will always bring a good price. Our saw mill men, and dealers, too, are too much in the habit of shipping poor stock to the eastern market, and, if they have nearly a car-load of passably fair lumber, they will fill up by putting in a few hundred feet of stuff containing loose knots, or heart on one side and various other defects, thinking that, as the greater part of the car is *good*, that the poor will be accepted. Mistaken idea ; it will be thrown out, and if they receive any pay for it at all, the amount will be less than the cost of transportation, and thus they lessen the profits on their really fair lumber.

There is no use talking ; this matter of properly preparing lumber for the market is an all-important one, and there should be a thorough canvas of the matter between the mill men and the manufacturers. It will result in much good to both.

Let me again say to the mill men : If you expect to realize a good price for your ash and walnut lumber, do not fail to see that it is properly manufactured before it leaves the mill. It must have square edges ; sap taken off ; leave no boards with hearts in them ; trim the ends off square, and to even lengths, and see that it is not split by careless handling ; and bear in mind also that *thick* lumber, one and a half inches and over, must be more nearly clear than thinner boards, if they pass into the grades of firsts and seconds. If you are cutting ash—4 inches thick—do not imagine for a moment that a board with heart showing on one side will pass as merchantable lumber. It will not. Put such boards back on your head-blocks and saw them into thinner ones. The writer of this, who handles perhaps as much or more than any other dealer in the country, would gladly be willing to pay a better price, if lumber was brought to him in proper shape.

GAS FROM SAWDUST.

The London *Timber Trades Journal* says :—So far as we are aware, the making of illuminating gas from sawdust is a new branch of trade : certainly it is one of considerable importance from the fact that it deals with what, in the majority of cases, is a waste product. We are advised that Mr. R. Tomlinson, late manager of the Cottingham Gas Works, near Hull, has just completed the erection of the gasworks and lighting the town of Deseronta, Ontario, Canada, the works being erected for the purpose of making gas from fine sawdust. The gas produced is said to be far superior to that made from the best Silkstone coal, and to be equal to that made from the best cannel coal. It would appear that Mr. Tomlinson is specially commissioned in the above matter, for we learn that upon completion of some water mains, which he has also in hand, he intends returning to England.

As a basis for the manufacture of illuminating gas, sawdust lays claim to many specialities, more so in the wood-producing countries of Northern Europe and America, where coal has to be obtained at great cost, and where sawdust is a greater drug and a nuisance, than in our own country. Side by side with coal, they have a raw material ready to their hands, one which in many cases they would cast in the rivers, but are prohibited from so doing on the ground that it sinks to the bottom upon saturation, and, like the bark of trees, becomes injurious to

the fish. In most cases it is piled up on the banks of the rivers, where, from the size of the heaps, they are justly called "mountains of sawdust," We have seen sawdust so cast aside form features in the landscape of the Swedish river banks altogether dwarfing the mills and their surroundings, and we have no doubt but other countries, such as Russia and Canada, can give like experience of this waste product. In England sawdust is not generally a waste product; it is compressed with a solution of resin, and becomes an article of commerce for lighting fires; it is also used for strewing on the floors of certain shops after the manner of sand, as bedding for horses, and for packing purposes, &c., but the bulk of it is mixed with coal and other refuse and burnt under the steam boilers.

As sawdust can be practically applied to the manufacture of illuminating gas, it is clear, as in the above instance, that, where the supply is at hand, towns may be illuminated by it; but it strikes us as being applicable in a smaller and more general degree in the case of illuminating saw-mills, joinery works, and other establishments where sawdust is produced. We take it that its manufacture could be conducted on a simpler plan than that of coal gas, because it would be more free from mineral residue, and require less labor and plant in connection with its purification. Further, the coke or ash remaining would be a valuable fuel for heating and cooking purposes, where sulphurous fumes were objected to. We can well understand that sawdust would produce a good illuminating gas, for it is of all materials the most combustible, or capable of producing flame; for domestic purposes it would be most valuable, as its combustion would be free from such deleterious ingredients as sulphur. We think there is an opening here for the operations of our engineers to produce small cheap plants for gas-making from sawdust; such plants, although not largely applicable in England, where there is plenty of coal and but little sawdust, would be freely used on the Continent, where there is little or no coal and plenty of sawdust or waste wood.

REDUCE THE CUT.

The London *Timber Trades Journal* says:—Now that the time approaches when arrangements for work in the forests will have to be made, we cannot too strongly urge upon manufacturers at the various shipping ports the necessity there is for conducting these operations on a scale that will assist in adjusting the balance between supply and demand, which has been sadly thrown out of gear the past few years. Cutting this year should be considerably reduced, and certainly no fancy prices ought to be paid by mills for log lots.

The cause this year of the unsatisfactory state of the trade and the consequent falling prices may in a great measure be accounted for by the large winter operations of 1881-1882.

As long as the supply is in excess of the demand there is no chance for prices to recover; on the contrary they must continue their downward tendency, and no first cost, however low the scale, will be reliable as coming within the scope of the markets over here while the overproduction lasts.

It is generally believed that not alone in the timber trade, but in other manufactures, the wave of depression which is passing over the commercial world is traceable to their being "too much of the commodity." The result has been greater clearance sales either by public auction or in the ordinary way, but in which the first cost of the article disposed of has been left out of consideration altogether. The present condition of trade has reached a climax that necessitates some alteration or another if it is to be conducted on any system at all. The haphazard style of doing things cannot possibly be satisfactory to the manufacturer, and must lead ultimately to immense losses on one side or another.

Even if goods could be bought first hand to leave a profit at the prices now current, unless the over-stock ceased the downward tendency would remain unchecked. Hence from every point of view it is most desirable, especially at the Swedish ports from whence the bulk of the timber supplies come, that the forest cutting should be kept this winter within moderate limits, so that the following season might admit of the present over-stock being realized at something like paying prices.

WHOLESALE TIMBER REMOVAL.

A consequence of the greedy wholesale removal of timber, which is well worthy of consideration, is mentioned in William Morris' article on "Irish Local Government," in the last *Macmillan*. He is writing of the spread of bog in certain districts, and he says:—"On the bottom are found the stools of immense trees which kept those areas free from the clinging black peat. These trees were cut down, and furnished in many cases the export timber trade in Ireland in the seventeenth century. Subsequently to this original state the land grew under—or brushwood, and as peat grew simultaneously this growth of wood dwindled till finally it ceased, and so the hazel stools are left at certain heights in the peat as mile-stones, marking the progress in the age or rather state of bog, and after this depth of peat had been attained the areas only grew heather and the other moorland plants." The following expedient is pointed out as the remedy for this waste:—"Taking the waters into the stone by deepening the old channels and opening up new would arrest the development of this process."

LUMBER TO MAURITIUS.

Mauritius is an island in the Indian ocean, lying east of Madagascar, and belongs to Great Britain. Far away as it is the lumber market there depends on Sweden mainly for its supply of pine. It comes either direct from Scandinavia or by way of England. It is shipped in the shape of 3-inch deals, and some of it is re-sawed into 1½-inch and 1-inch stuff, with the ends left joined so that the 3-inch sawed piece can be handled as one instead of two or three pieces. The lumber is very evenly cut; and importers believing that lumber could be sawed equally as well in America, ordered lumber from here sawed in a similar way, but were disappointed at the "shameful" way the work was done, considering the perfection we claim for our woodworking machinery. Alexander Duff & Co., of Boston, have shipped lumber and shingles to Mauritius, T. B. Robinson having charge of their trade at Port Louis, the principal place on the island.—*Northwestern Lumberman.*

AN ILL WIND BLOWS GOOD.

The *Timber Trades Journal* says:—The great destruction of property caused by the recent heavy gales cannot help giving the consumption of timber some stimulus. The damage to many of the parades and piers at the watering-places of the south coast will have to be made good in the first instance by timber, and the local demand at those which have suffered the most severely will doubtless become active for a time. It is a true saying that it is an ill wind which blows nobody any good, for the winds of Saturday and Sunday evidently blew the timber merchants, down Channel way, a plum. So with the destruction of shipping, due to these gales, repairs will be necessitated that will call into requisition timber of different kinds, annd which, though small in themselves, must mount up in the aggregate to something like a respectable total, which will assist shipbuilders in reducing their stocks, and thus promote the trade.

New Brunswick Exports.

The business of shipping piling and firewood from the port of St. John has been more extensive this season than ever before, and greater preparations will be made for next season. The amount of piling shipped was 94 cargoes, containing 49,252 pieces of piling, and the large shipment made in the cribs is excluded from this. The greater portion of the piling was shipped to New York, but some cargoes were sent to St. John's, Newfoundland, to be used in the construction of the dry docks at that port. The firewood shipped was 133 cargoes, containing 8,462 cords. Of this quantity, by far the larger part was shipped to Rockland and Rockport, Me. Many schooners are constantly engaged in the latter trade. Besides this quantity, many cargoes of both piling and firewood were shipped from Quaco, Musquash and Lepreaux,

Chips.

A HOTEL to go up at St. Augustine, Fla., will require 2,000,000 feet of lumber.

TERRIFIC forest fires have been raging in the neighborhood of Hall's Bay, Newfoundland.

A SALE of 500,000 feet of black ash lumber was made recently at Saginaw, Mich., at $13 a thousand.

THE Belleville *Intelligencer* says that another consignment of timber is on the way here, from Bobcaygeon.

THE Brandon *Mail* says: "The American Lumber Company have sold their business in this city to Mr. P. McLaren. Mr. R. F. Edgar, wood dealer, will be connected with this firm."

THE *Monetary Times* says: "At the Rankine mill, on the St. John, the wharves have been rebuilt, fitted with tramways, and so enlarged that they have now capacity for 10,000,000 feet of lumber."

RUSSIA has been for a long time suffering the effects of reckless forest devastation. *Nevoe Vremya* says that the wanton destruction of timber threatens to turn some of the best wooded provinces into a barren waste.

A WRITER in the *Home and Farm* used about a quart of sawdust on each hill of a plot of potatoes and none in another plot. The sawdust hills yielded nearly twice as much as the others, and the potatoes were larger and smoother.

THE total length of public roads in France is 18,750 miles, of which 7,250 are bordered with trees, while 4,500 miles are at present being planted. The number of trees already planted is 2,678,603, consisting of elm, poplar, acacia, plane, ash, sycamore and lime.

THE *Monetary Times* says: "The quantity of lumber shipped down the St. Clair River is very great. On one day, between Detroit and Baby's Point no fewer than twenty two propellers and vessels were met laden with lumber of various kinds and shingles, one carrying tan bark and another cedar posts."

AN Ottawa correspondent says:—The Chaudiere mill men are filling up their yards rather than sell at a reduced price. Many of them are extending their piling grounds. There is considerable of a stir among American boatmen just now and freight rates have been somewhat reduced. Many of them are taking their last cargo for the season, which accounts for the reduction.

The *Northwestern Lumberman* says:—Lively logging is reported from Hubbard Lake, Mich., district. On Tuesday, September 4, 338 pine trees were standing in that locality, and by the Friday following the trees were cut down, sawed into logs, hauled to the railroad, carried to Lake Huron, 30 miles, towed to Ossineke, Alpena County, and when scaled were found to measure 250,000 feet.

THE republic of Guatemala has engaged a Celon planter to introduce into that country 500,000 cinchona trees, for obtaining peruvian bark, from which is distilled the salt known as quinine. President Barrios was led to try this experiment owing to the great increase in the use of cinchona bark, not only for quinine and as an ingredient in a substitute for hops, but for various commercial purposes.

AN Ottawa despatch of Sept. 12th says:—At the Russell House to-day the extensive timber limits of A. & P. White, Pembroke, were offered for sale. The first parcel offered was nearly four hundred square miles, on the Magnissippi; the highest bid was $200,000, but the owner considered the figure too low, and withdrew the parcel. Seventy-nine miles square and a small saw mill on the Deux Rivieres were then put up and withdrawn.

THE Kingston *News* of Sept. 19th, says:—Mr. W. Leslie has had three rafts made at French Bay, each of which is five tier deep. One of them has arrived at Port Dalhousie in tow of the tug McArthur. In the three rafts there are 480,000 feet of timber, equal to about thirty vessel loads. In the formation of each raft about 40 tons of chain is used, so that it will stand the sea as well as a barge. If the experiment of bringing timber down the lake in rafts is a success the timber vessels will suffer.

THE *Monetary Times* thus summarizes a portion of Mr. W. J. Paterson's valuable report on the trade of Montreal: "Exports of lumber and deals, especially to South America, which had declined some years ago, have recovered. The figures indicate that Montreal is attracting a good share of the deal export business. This increase is by no means accounted for by the revival of the River Plate trade, which had declined from 36,673,919 ft. in 1873 to 3,437,000 ft. in 1876, but now gives evidence of assuming its former proportions, the quantity exported last year from Montreal being 21,733,262 ft., some 48 vessels sailing hence for the Plate.

The Toronto *Globe* of Sept. 15 says:—A case has arisen in the township of Glamorgan which is likely to prove of great interest to lumbermen generally. Mr. Hilliard, of Peterborough, and a number of other, timber licensees from the Government, have been assessed for their interest in timber in question. This is the first time that such an interest has ever been assessed. A rule *nisi* for a prohibition to the township from proceeding with the assessement was applied for by Mr. Barron, of Lindsay, and granted yesterday. Lumbermen in the township are much interested in the result of the case, which will shortly be argued at Osgoode Hall.

W. A. EDGARS, of Frankville, was cured of Liver and Kidney Complaint after life was dispaired of. He had remained from ten to fifteen days without an action of the bowels. Burdock Blood Bitters cured him, and he writes that he is a better man than he has been for twenty years past.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

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ALL SUMMER COMPLAINTS
SOLD BY ALL DEALERS.

Market Reports.

TORONTO.

From Our Own Correspondent.

SEPT. 24.—Business at the retail yards has been quiet during the last two weeks, owing to the exposition in progress here. That being over trade will resume its nominal state, and the retail trade will doubtless be brisk for the remainder of the building season. Prices remain *at least nominally the same* as previously quoted you, but there are instances which have come under my own notice where some cutting in figures below quotations has been done, although, as before stated, this cannot be done to any great extent without making it a losing game.

Shipments from our docks are more lively than at any previous period of the season, since my last letter the following quantities of lumber and shingles have left our docks: 4,000,000 feet of lumber and 500,000 M sawn shingles, so that daylight is now showing on our docks, and I trust not to be shut out again by such accumulations of lumber during the remainder of the season.

No lumber worth mentioning is being shipped by rail on through shipment to western Ontario, nearly all orders being filled from shipments made by water to Sarnia and other points, so that the Midland and N. & N. W. R. R. companies may yet find out to their cost that they have been strangling the goose that laid their golden eggs. It is a manifestly unjust proceeding on their part to charge fourth class rates on all excess weight, and yet provido no means of weighing the load at the point of shipment. It is said that the main agitator in this crusade against the interests of the lumbermen, is Mr. Robert Kerr, freight agent for the N. & N. W. R. R., backed up, of course, by that gigantic monopoly the G. T. R. R. Co., and, as a matter of course, the Midland Railway is held in leading strings, and the lumbermen know full well that to fight out this matter in the courts would be perhaps somewhat costly, as the whole resources of this railroad combination would bo available, and the ends of justice be defeated. If the heads of freight departments of the Midland and N. & N. W. Railroads wore not blind as to their own interests they would plainly see that they are playing a losing game, and the G. T. R. R. Co., are the gainers. The latter know full well that they will have the carrying of a large portion of the lumber which finds its way by the water routes, when it comes to be distributed to the customers, and tho N. & N. W. R. R. Co., will find out when too late that it is much easier to drive traffic from thoir road than to coax it back again.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
cantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50

B. M.

1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	3 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent

SEPT. 24.—Local trade has been moderately active and for some lines an improved demand has been experienced, which has caused a good deal of firmness without making any change in prices. Prospects are good for the fall trade and stocks are full so that dealers are prepared for the anticipated enquiry. There is fair enquiry on United States account, especially for hardwood, but common lumber is rather a drug in the market. Laths are steady and sell freely at quotations. We quote prices in the yards as follows:—

Pine, 1st quality, ₩ M	$35 00@40 00
Pine, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@80 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	1 60@ 0 00
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

CORDWOOD.

Stocks are fair and likely to continue so all the fall. Prices keep pretty firm, and the present high prices seem to tempt the country people as a number of them have been in the city offering wood for sale. The local demand has only been moderate. Wholesale prices are as follows:—

Long Maple	$ 7 50
Short "	6 50
Long Birch	7 00
Long Beech	6 00
Short "	5 00
Tamarack	5 00@6 00

LIVERPOOL MARKETS.

Latest mail advices state the consumption during the past month has been large, and as there has been a great pressure to sell, prices are lower, and 2nd quality and uniform lumber is difficult to place, Spruce deals sold at prices ranging from £6 17s. 6d. to £7 2s. 6d. per standard. A parcel of Quebec ash averaging 14 inches was placed at 2s. 3½d. per foot, elm 2s. per foot and walnut 4s. 6d. to 5s. 10d. per foot.

WINNIPEG.

The Winnipeg *Commercial* of Sept. 18, says: There is a good stoady demand for lumber. The supply on hand is large and will be much more than sufficient for all requirements this season. The great number of buildings now in course of erection in the city will, however, consume a large quantity before winter sets in. The following are the quotations:—Pine lumber, 1st, common boards dressed, $26.50; 2nd do. dressed, $25.50; 1st do. rough, $26.50; 2nd do. $25.50; sheathing, rough, $25; timber 16 feet and under, $24; do. over 16 feet, for each additional 2 feet, $1; dimension and joists 16 feet and under, $24; do. over 16 feet for each, $1; fencing, $25; 2 and 3 inch battens, $30; A stock boards, all widths, $50; B do $45; C do. $40; D. do. $35; 1st clear, 1, 1¼, 1½, and 2 inch, $60; 2nd do. $56; window and door casings, $50; baso boards, dressed, $50; 1st pine flooring, siding and ceiling, $40; 2nd do. $35; 3rd do. $30; ½ inch split siding, dressed, $30. Spruce lumbor—timber 16 feet and under, $22; do., over 16 feet for each additional 2 feet, $1; dimensions and joists, 16 feet and under, $23; do., over 16 feet for each additional 2 feet, $1; boards, $22; 1st flooring, siding and ceiling, $28; XX shingles, $5.25; Star A shingles, $5.25; X shingles, $5.00; A do. $4.50; lath $4.50.

QUEBEC.

A Quebec despatch of Sept. 20, says:—Our market is still without animation, and considering the season of the year, very few sales have taken place. A good raft of about 54 feet, is reported to have been sold at about 27 cents; and a fine raft of Nipissing timber of about 36 feet average, at prices which have not transpired, but stated to be about 29 cents. In hardwood we do not hear of anything doing.

A Quebec despatch states that there is a slight improvement in the timber market, and some rafts are reported as having changed hands. Thistlo's white pine 55 feet average, has been sold at 27 cents, and a Nipissing raft of white pine at 29½ cents. The fleets this fall are late in arriving, which accounts iu a great measure for the prevailing dulness, and no great change for the better is expected before the end of the month.

BOSTON.

Cotton, Wool and Iron of Sept. 22nd, says:—There has been no particular change in the tone affairs since our last. A good fall business is progressing and values are on quite a steady basis for general assortments. Eastern lumber is firmer, because of the continued drought. Western and southern lumber are steady, with a moderate demand. In hardwoods there is a good call for desirable walnut and cherry. Ash and whitewood are comparatively quiet.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₩ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@48 00
Pine, good box	22 00@35 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 22@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₩ M	28 00@30 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	45 00@47 00
Pine, 1¼-in. siding, common	18 00@20 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	16 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	35 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

Wo quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of Sept. 22, says: The number of lumber laden vessels arrived at this port during the week exceeded the arrivals for the week previous, the comparison standing 280 this week to 241 the week before. A large proportionate number has stopped at the market docks. On Monday there was one of the largest fleets seen at the market this season, Sunday's arrivals in port being 52 and Monday's 77, the usual proportion going on the market. But, though the market was so well loaded, by Tuosday noon the fleet had been all cleaned out, and the hookers were making what speed they could for the east shore for new loads. Vessels that discharged cargoes on Saturday were seen back again Tuesday, which showed an eagerness to get around lively with the lumber, so as to take the market at high tide before an ebb should come. The activity and strength noticed as beginning week before last, and really pronounced last week, was fully maintained until about Tuesday of the present week, when the market manifested a little weariness under the intense labor it had performed, and slowed a little, though prices remained steadfast and firm. The gain of 25 cents a thousand on piece stuff that was claimed last week is now sufficiently established so that the $9 figure can be safely advanced to $9.25, though it may have to be dropped again next week, that contingency depending on the weather and the feeling in the yards, to some degree.

It is a rather remarkable circumstance that this market is devouring lumber so ravenously, when the existing condition of yard trade is considered. Not that it is intimated that the volume of demand for distribution is not fairly large, for that would not be true. When we speak of the existing condition as unfavorable to yard trade, we meau that prices are so demoralized, and margins so thin and uncertain, that the rate at which wholesale dealers are stockiug up is really something to be wondered at.

The rush of shingles has somewhat abated, and prices are steadying down, though not showing any advauce. It is scarcely possible that shingles of common and inferior grades can be worth more than now for some time to come, and really good shingles have all along sold for fair prices.

Quotations are as follows:—

Short dimension, green	$ 9 25@ 9 75
Long dimension, green	10 00@11 00
Boards and strips—No. 2	10 50@12 50
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 10@ 2 20
Extra A	2 40@ 2 60
Lath	1 50@ 1 70

STOCK ON HAND SEPT. 1.

	1883.	1882.	1881.
Lumber	576,384,049	580,890,533	481,154,279
Shingles	371,285,690	226,806,750	219,628,000
Lath	59,941,215	42,996,432	37,556,820
Pickets	1,888,036	2,678,476	2,030,210
Cedar posts	473,402	218,309	256,235

OSWEGO, N. Y.

From Our Own Correspondent.

No change in qotations. There has been a sharp upturn in lake and canal rates, advancing cost of transportation between Canadian ports and New York fully $1 per M ft., and between Michigan ports and New York $1.75 per M.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LEITH.

The *Timber Trades Journal* of Sept. 8, says: The arrivals at this port during the past seven days has been pretty numerous, the most important, perhaps, being a large steamer shipment of deals and battens from Cronstadt for Messrs. Ferguson, Davidson & Co. Though the demand is fairly good, stocks are now assumiug large proportions, and considerable quantities have yet to arrive. Unlike Baltic goods, the importation of American timber has been heavier this season than last, the result being that prices are difficult to maintain, consumers being perfectly well aware that the market is heavily stocked. In this district, also, pitch pine is now frequently used in place of yellow pine, and this is becoming daily more common. No public sales have been held during the past week, but Messrs. Mitchell, Somerville & Co. have one announced for Tuesday last.

CARDIFF.

The *Timber Trades Journal* of Sept. 8 says:—Since our last report numerous arrivals have come to hand, amongst them being one cargo of floorings, from Drammen, another with pulp, from the same place, two large Quebec cargoes, two from Miramichi, one steamer with sleepers from Narva, one from the Baltic, and the largest cargo ever imported to Cardiff, viz., 1,040 standards, from St. John. This latter cargo will be landed at Penarth Dock, where, as a rule good despatch is obtained. It is a pity it did not come into the Bute Dock, as it would have been a test for the Bute people's capabilities for discharging. As it appears now that at least half of the import of timber and deals to this place will be effected by steam tonnage, our merchants will scarcely be able to compete with neighboring ports if the despatch of steamers continues to be as slow as has been the case up to this time, as owuers cannot afford to give eight to ten days for discharging 500 to 600 standards.

LIVERPOOL.

The *Timber Trades Journal* of Sept. 8, says: The import during the past week has been more than sufficient for the wants of the trade, and with the continued depression in cotton manufacturing districts there is not likely to be any improvement, so far as can be seen at present, since the settlement of the disputes now existing between the artizans aud their employers seems as far off as ever. Apart from the generally

dull and languid condition of business, the import for the present season is apparently likely to be beyond the wants of the trade, and so long as supplies are forced upon the market in the way they are being pressed forward we cannot hope to have any better prices than those now ruling.

Spruce deals continue to come forward freely, and although some shipments are being stored on account of importers, others are being sold on best terms obtainable, and unless shipments are considerably diminished for the remainder of the season, there is apparently no reason why prices should not descend even below the figures they have touched at present.

Several lots of Quebec timber have come upon the market on consignment, and have been sold at fair prices, mostly to the local trade.

On the 30th of August, Messrs. A. F. & D. Mackay held one of their periodical auction sales of deals, birch and other woods, which was well attended. Spruce deals showed a slight decline in value, but the birch timber sold readily, and both the St. John, N. B., and the Pictou wood realized good prices.

The *Timber Trades Journal* of Sept. 15, says: There is no change in the tone of the reports of trade from the great centres of business in this locality, as all still continue to convey a deeply felt state of depression which may take some time before relief is felt. All the great manufacturing districts are evidently embarrassed with an overplus of manufactured goods, and the probability of having large supplies of the raw material to come forward. This is evidently the case with the timber trade here, as the imports continue to be far beyond the demands upon it, and the stocks on hand are increasing to a large extent.

In fact, it is possible, or even more, it is probable, that quotations may yet see a lower point if consignments continue to be pressed upon an already overladen market.

These remarks apply with greater force to the North American and Canadian shipments, as the recent heavy deliveries of hewn pitch pine timber have lightened this stock materially, and this article is now within reasonable bounds.

LONDON.

The *Timber Trades Journal* of Sept. 15, says: With bidding plentiful for goods which have a limitation on them, the activity of the trade can be better ascertained, and we take it as a hopeful sign that so many of such lots on Wednesday changed hands, though, as already stated, outside of these the prices did not betray any advance on those recently recorded, and it was only in respect of Canadian goods that the unreserved were sought after by the room, There were some heavy parcels of Uleaborg and Abo battens without reserve in Wednesday's sale that went cheap, but bidders seemed to think the prices quite sufficient, as though apparently anxious to secure the goods they showed no disposition to do so at any advance.

GLASGOW.

The *Timber Trades Journal* of Sept. 15, says: Imports of wood to Clyde during the past week comprise four cargoes of Quebec timber at Greenock, the aggregate tonnage of the vessels 4,894 tons; and at Glasgow about 2,000 loads, consisting chiefly of sundry parcels per steam liners. The importation of deals from Quebec to Clyde this year to date has been about the same as corresponding period last year (say 400,000 pieces). The arrivals of Quebec log timber in 1882 were unusually light, and this year shows a decided increase. Following are the amounts (to end of August) for the past three years:—Quebec waney boardwood and yellow and red pine: 1881, 33,500 logs: 1882, 19,600; 1883, 35,000. Quebec oak, elm, ash, and Quebec and lower port birch: 1881, 14,400 logs; 1882, 6,500; 1883, 11,600.

Much of what is imported is no doubt with the view of supplying the wants of ship-builders, who may be considered the largest consumers, for there is little movement here as yet in housebuilding, and it remains to be seen how the importers' estimate as to the quantity and character of the wood imported turns out. First-class yellow pine for deck plank no doubt is safe, and may in some cases be sold to arrive, Shipbuilders buying for the most part privately, prices do not transpire.

MONTREAL NOTES.

The Montreal *Gazette* of Sept. 21st, says:—A fair business has transpired since our last report, showing a slight improvement in the local demand at steady prices. Laths have met with fair enquiry at $1.60 per M. Stocks now are well assorted and better seasoned, and a good trade is confidently expected between now and the close of navigation. There is still some enquiry for hardwood on American account, the sale of a boat load of ash being made on p. t., but believed to be at within range of quotations. Advices state that the mills in the New England combination agreed to give no discount after the 15th instant. They previously allowed 5 per cent. There is a good demand for pine in Boston, with prices firm for best stock. A Boston dealer in pine and in hardwoods, who has just returned from an extensive business tour at the west, remarked:—"I was never more surprised than I have been to find how very scarce good lumber is becoming. You see, all through the hard times all who had timber cut off the good, because it was the only stock that it would pay to cut. Then, again people in buying timber lots bought the best, those which would give the best lumber, and now what is left is mostly Norway and common stock. Why, I went right into the forests regions of Michigan, and in one central place where there are a dozen manufacturers I could only find one who had any good lumber in any quantity. One manufacturer who had 1,000,000 feet had only a few carloads of the best quality, and it was all mostly Norway and common. There is even a great change with what it was a year ago. Manufacturers don't have to seek customers for their good lumber, and stock that I had engaged ahead could have been sold many times over. On the other hand, common lumber is accumulating, and while prices are not so easy as they have been, they are not strong. Common pine, however, has a good western outlet, but common hardwoods are not much wanted."

OTTAWA.

The Ottawa *Citizen* of Sept. 22, says:—The Ottawa lumbermen who have commenced to hire hands for the coming seasons's operations have opened a wages list with an average reduction of $4 per month all around for hush hands. Wages run from $15 to $22, with a prospect of a further reduction next month, when the harvest is finished and farm hands begin to look for a winter's engagement in the woods, There will be a great reduction in operations on some parts of the Ottawa, for instance, Mr. J. R. Booth, it is said, will have no shanties on the Opeongo, Madawaska or Mississippi next winter, which means that there will be 300 men dispensed with there. The McLachlan Bros. will also curtail their winter's work in the same district, owing to the fact that they have over 100,000 logs left over on the Madawaska ready for next season's sawing. A new slide at the High Falls is to be built during the coming winter, which will greatly facilitate the passage of timber at that dangerous spot.

THE CLYDE TRADE.

Singleton, Dunn & Co.'s timber circular dated Glasgow, 6th Sept., says:—Most of the spring fleet came forward during last month, and almost all the vessels have again cleared for Quebec for fall business. The stocks of Quebec timber are fair, and rates may be maintained if only caution is exercised later on in regard to supplies. Should the fall import be as large as the spring import, we do not think the market will support prices. No doubt the consumption is fair, but the principal factor in this is the shipbuilding branch (which continues fully employed), in which there is an outlet for only the higher grades. A slight improvement is manifest in the building trades, consequent mainly on the progress of some extensive public buildings and local railway works. North of Europe wood goods continue very moderate in price, white deals costing less c. i. f. to Grangemouth than is quoted for Canadian spruce to Clyde ports.

WHITE PINE.—An entire shipment, contract lot, was sold at, for prime deck plankwood, 50 feet average, 2s. 7½d., and 60 feet average, 2s. 8½d., delivered at Glasgow. A fair quantity of prime 55 feet average was sold at 2s. 7d. per cubic foot, in ponds, and 50 feet average at 2s. 6d. Some large sales of deckwood were made to arrive, and prices for these are not disclosed, but surmised to be quite in favor of importers.

DEALS.—1st pine—For ordinary sizes there is little enquiry, and prices low. The trade wish wide deals only. For 12 ft.x7 to 11x3, 2s. 6d. per cubic foot, was made, and for long deals rather more. 2nd pine—few sold. Prices from 18d. to 23d. per cubic ft., according to size.

A LONDON SALE.

The London *Timber Trades Journal* of Sept. 8 says Messrs. Foy, Morgan, & Co.'s sale was well attended.

The prices of Archangle goods did not look as if the corner had been turned, and we fail to trace any favourable tendency in the market when 1st yellow from the port named realizes no more than £13 15s.

For the yellow pine timber ex *Deeside* from Quebec prices took a wide range, the two first lots going at 87s. 6d., and the remaining three at a little more than half the figure named. It is true the dimensions might account for some of the difference, but they were hardly so divergent as to reduce the value so materially as the sales prices seemed to indicate.

The waney pine ex this ship went from 62s. 6d. to 72s. 7d., but there were very few pieces over 20 in. wide. Prices for goods of this description were nevertheless very unfavorable, and with respect to the flooring disposed of on Wednesday also, values were decidedly lower than at previous sales, but every stick of it was without reserve, representing some 800 standards or so of this class of goods.

FOREST FIRES.

ELLSWORTH, Me. Sept. 24.—A forest fire at West Bay, Gouldsboro, consumed the Union church, town house, and the residence of A. G. Guptill, with stables, yesterday. The fire is still raging, and other buildings are in immediate danger. The present damage to buildings is estimated at $8,000, and heavy damage has been done to the forest.

CALAIS, Me., Sept. 26.—Forest fires are very prevalent along the shore line between Calais and Machias, and along the line of the St. Croix and Penobscot railroad. They are doing a great deal of damage in Alexander, Charlotte, Baileyville, and other places. Considerable timber land has been burned over. Violent winds are prevailing, and the fires are being fought by large crowds day and night.

SANTA CRUZ, Cala., Sept. 26.—Immense fires are raging. The forests and ranches above here are already terribly damaged. A despatch from Davenport's Landing states that the entire country is in flames. One hundred and forty men went from here to aid in the arrest of the fire. The Santa Cruz Water Company have 50 men fighting the flames, which are within five miles of here. Fears are entertained for the city.

Do not delay, if suffering any form of Bowel Complaint, however mild apparently may be the attack, but use Dr. Fowler's Extract of Wild Strawberry. It is the old reliable cure for all forms of Summer Complaint that require prompt treatment. Ask your druggist and all dealers in patent medicines.

JONES & SON,
Wholesale Lumber & Timber Dealers
39 Broadway, NEW YORK.

Oak, Ash, Cherry, Black Walnut, Poplar, Butternut
And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.
Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.
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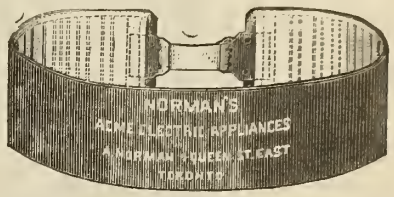

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A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head hand I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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A REMINISCENE OF THE FRUIT BOX INDUSTRY.

"It is generally supposed," says the New York *Maritime Register*, "that the boxes in which oranges and lemens are sent te this ceuntry from the Mediterranean, are made aleng the shores of that sea. This was the case years ago, but it is se no longer. Fermerly the shooks were hewed out of the log by hand in Italy and sent down to the packers. But a few years ago, Capt. T. J. Stewart, a native of Maine, a shipmaster who had traded with the Italian ports, came te the conclusion that these shooks ceuld be made much cheaper in his native state and shipped thence to the fruit districts at a profit. With him to think was to act. He accordingly retired from the sea and proceeded to Bangor, the centre of the Maine lumbering intercsts, where he put his new idea into practice. It has proved highly successful. Mills were erected in the woods miles backs of Bangor, and shooks of all description were quickly turned eut by the thousands. Shooks for orange, lemon and cranberry boxes, for onion boxes, oil and fish cases, were made in these woods, forwarded to Bangor by rail, and exported thence te our great ports and the Mediterranean fruit districts. The trade has now grown to important proportions, and it is said that few oranges and lemons arrive in this country that are not in boxes of Maine makc. Our poetical friend, who at the sight of tempting boxes of oranges lets his mind wander to the sunny skies of Italy, and thinks of scented groves and the blue waters of the famous sea, can let his thoughts also wander to the forest covercd hills of the Pine Tree state, whence cemes the wood that holds the brilliant-hued fruit. The more practieal mind, however, will rejoice in the fact that much of the timber which in former years, was literally wasted in Maine is now turned to such good advantage. By shipping orange and lemen box shooks, not only is a large and lucrative trade opened, but the transport of these goeds brings additional business to Bangor in the supplies furnished there to vessels employed in the trade. It is difficult to estimato the money extent by this, but it is easy to see that it must be of great value to the pert."

OTTAWA NOTES.

An Ottawa correspondent says :—"The sawn lumber market has taken a decided change for the better within the past few days. Several prominent New York dealers have been in the city, and their purchases are said to have aggregated 8,000,000 million feet, principally of the higher grades, and an advance of 25 cents per thousand feet is quoted on these qualites. This has given an impetus te shipping, and the lumber docks have resumed their usual bustle. There is a fair prospect of this state of things being continued now until the close of navigation. Freight rates average about the same as last year. The activity of the market will net, it is said, interfere with the determination of mill men to curtail operations during the coming winter. Present indications now lead to the supposition that the quantity of upper grade lumber to be wintered here will be somewhat smaller than last season, and should this prove correct mill men generally will close this year with a fairly good record.

Lumbermen this year are using mere beef in connection with their shantics. Some time ago nothing but pork was used, the supplies being drawn principally from Chicago, but since the export trade in cattle has assumed so large proportions farmers in the Ottawa Valley havo devoted more time and attention to cattle raising, and are now supplying many of the lumber shanties with beef. During the past week several hundred head of cattle have been shipped for the Upper Ottawa, and the prospects are that the pork trado will, in the course of a few years, be seriously affected."

TIMBER SALES IN NEW BRUNSWICK.

The New Brunswick Government recently mado a change in its system of granting timber leases on its lands. By the old plan leases were good for five years only. Now the time has been extended to ten years, and the new way has been found to work exceedingly well, lumbermen being more anxious to secure leases for that time than for the sherter peried. The stumpage has been raised from 80 cents to one dollar per thousand this year, and $1.25 for each subsequent year, en logs, and a prohibitory charge put upon small lumber. An important sale of these limits took place at Fredricton last week, and the Government is well satisfied with the result of the three days' proceedings. Over thirty-eight thousand dollars were realized, and the number of square miles leased was 3.18½. In the sales made on the 7th instant 1,270 square miles were offered, of which 1,046½ square miles were sold—959 at upset price, $7,672, and 87½ at competition, for $4,231 ; total $11,903. The highest bid was for six square miles at Dungarvon, Miramichi, when $141 per square mile was offered. Last year, the sales amounted to $31,000 for abent 4,800 square miles. The *Telegraph* is jubilant over the result, and says, "this fact shews that the lumbermen appreciate the new regulations and have been prompt to avail themselves of them. The handsome sum realized,—$38,000,—is, we think, the largest ever received at any sale, and less than $3,000 under the aggregate receipts from all sales last year.

NEW BRUNSWICK TRADE.

The St. Sohu's N. B. *News* of September 10th says :—Four million feet of logs recently changed hands in St. John, at $9 per M., for shipment to the American market, which exhibits marked improvement over prices prevalent in the early part of the season. Another lumberman has between four and five million feet on hand, which he is holding for $9.30 per M. The above transactien must have netted the seller at least $2,000. There is a good deal of vitality in tho "waning industry" after all. The European market shows no signs of improvement, but the prospect is that there will be the heaviest shipment this month that has been recorded for years. It is apparent that a more moderate cut of legs in this Province is necessary to ensure good prices. At present £12 6s. per standard is the best offered on the other side, which is about equal te $7 per M. on this side of the water. Freight figures are dull. The Crown Lands revennes from sales, &c., this year will, it is expected, aggregate over $50,000 —an excess of about 15 per cent. over last year's receipts."

EXPLORING NEWFOUNDLAND.

Mr. Hall, one of the largest lumber manufacturers in the world, and one of Canada's leading merchants, arrived here, says the St. John, Newfoundland, *Mercury*, on Thursday by the steamship Polino. He brought a party of explorers with him, who departed in the Polino for the purpose of being landed in the Bay of Islands, where, sheuld the explorers' reports prove favorable, he proposes to establish a large lumbering manufacturing business. The initiation of the scheme also depends upon the terms upon which the Government will be able to make grants of land ; and it is to be hoped that nothing will be left undone to assist in the establishment of an enterprise so well calculated to develop a portion of this country. Mr. Hall has also an idea of exploring the Exploits river. He has been looking at our dry-dock, and says that in all his vast experience he has never seen finer timber used in such work—an opinion of great value because of his knowledge of the subject.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., wil send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

Convincing Proof.

Having suffered from rheumatism for a long time I was induced to try your Arnica and Oil Liniment. The first application gave instant relief, and now I am able to attend to buisness, thanks to your wonderful medicine.

I am yours truly,
W. H. Dickison,
218 St. Constant St., Montreal.

Te Henry, Johnsons & Lord, Montreal.

Arnica and Oil Liniment is sold by all Druggists.

$40,000 IN PRESENTS GIVEN AWAY!

This Offer Good Till Thanksgiving Day Only.

The proprietors of the **FARM, FIELD AND FIRESIDE**, being desirous of having their already well-known and popular Agricultural and Family paper more widely circulated and introduced into houses where it is not already known, have determined to throw off all profit this year, and in addition use a portion of their capital for the sole purpose of increasing their circulation to **100,000** copies. Its circulation is now **65,000.** Only **35,000** more needed before the distribution takes place. After deciding to more extensively advertise than ever before, the following plan has been adopted by us:

FOR 50 CENTS

We will enter your name on our subscription book and mail the **FARM, FIELD AND FIRESIDE** regularly to you for Six Months and immediately send a **printed numbered Receipt**, which will entitle the holder to one of the following Presents to be given away at our **THANKSGIVING FESTIVAL.**

Partial List of Presents to Be Given Away.

5 U. S. Government Bonds of $1000	$5000 00	1000 Pocket Silver Fruit Knives	$1000 00
10 U. S. Greenbacks of $500	5000 00	1000 Gents' Pocket Knives	1000 00
10 U. S. Greenbacks of $100	1000 00	1000 U. S. Greenbacks of $1 each	1000 00
1 Matched pair of Trotting Horses	1000 00	10 Gents' Gold Watches, English Movement	800 00
1 Grand Square Piano	800 00	10 Ladies' Gold Watches, English Movem't	600 00
1 Grand Cabinet Organ	200 00	20 Boys' Silver Watches, American Move't	200 00
1 Three-seat Rockaway	200 00	8 Solitaire Diamond Finger Rings	400 00
1 Silver Dinner Service	100 00	3 Patent Harvesters	1000 00
5 Top Buggies	1000 00	1 Normandy Work Horse	500 00
20 U. S. Greenbacks of $50 each	1000 00	2500 Elegant Oleograph Pictures	2500 00
1000 Photograph Albums $2 each	2000 00	5 Raw Silk Parlor Suit Furniture	1000 00
2 Village Carts	200 00	1460 Gold Finger Rings, Ladies' Breast Pins, Gents' Scarf Pins, Lockets, Fans and Chains.	
1 Pony Phaeton	100 00		

And 92,935 other presents valued from 25 cents to $1.00, which makes a grand aggregation of 100,000 presents, thus guaranteeing a present to each and every new subscriber who sends us **50 Cts.** as directed.

All of the above presents will be awarded in a fair and impartial manner by committee chosen at the Festival by the Subscribers; this festival will take place without fail. It will not be necessary for Subscribers to attend the Festival, as presents will be sent to any part of the United States or Canada. Yet it is to be hoped as many will be present as possible. **THE 50 CENTS** which you send us is the regular price for Six Months' Subscription, and therefore we charge nothing for the presents. **OUR PROFIT** will be in your future patronage, as we believe you will like our paper so well that you will always remain a subscriber. **YOUR SUBSCRIPTION FREE.** Get five of your friends to join you by cutting this out and showing it to them. Send us $2.50 and we will send you the **FARM, FIELD AND FIRESIDE** for six months, and a numbered receipt for each of your subscribers and one extra for your trouble.

SEND TEN SUBSCRIBERS with $5 and we will send **12** subscriptions and twelve numbered receipts. We shall limit the number of new subscriptions to **100,000,** so we would advise all our friends to forward subscriptions early.

THE FARM, FIELD AND FIRESIDE

is one of the oldest and ablest edited Family and Agricultural papers. It contains twenty large pages (Eighty Columns), including elegant cover, bound, stitched and cut. And now has a circulation of **65,000** copies, and we are sure to reach the **100,000** at the time set, and the distribution of presents will take place on that date. It contains **Stories, Sketches, Poetry, Farm, Garden, Household and Agricultural Departments by the best Contributors of the day,** as well as an **Illustrated Fashion Department, Needle and Embroidery Work.** Illustrations of different parts of the **UNITED STATES** and Biographical Sketches of Eminent Men and Women. In short, it contains that which will interest, instruct and amuse the whole family.

THE PROPRIETORS are men of means, who always have done as they agree, and our paper is long established and reliable, with sufficient capital to carry out and fulfill to the letter any offer we may make.

TO THOSE WHO DO NOT ATTEND THE FESTIVAL we will send a printed List of the Awards, and all Presents will be forwarded to Holders of Receipts as they may direct. If you have not seen this elegant and beautiful paper, send for a Sample Copy which will be Sent Free.

ONLY 50 CENTS secures the **FARM, FIELD & FIRESIDE** Six Months, and a numbered receipt. The paper is worth double the subscription price. *As to our reliability we refer those who do not know us to any reputable Publisher in Chicago.*

Money in sums of $1.00 or less may be sent in ordinary letter at our risk, larger sums should be sent by Registered Letter, P. O. money order or Express. (Mention This Paper.)

REMEMBER these are Presents to our Subscribers given to them absolutely Free. Cut this out and show to friends, acquaintances and neighbors, as it will not appear again, and is the last opportunity you will have to take advantage of this extraordinary offer. Two-cent Postage Stamps taken in sums less than $1.00.

The FARM, FIELD AND FIRESIDE, 89 Randolph Street, Chicago, Ill.

Read These Testimonials.

CHICAGO, Aug. 21, 1883.
We have furnished the paper for the FARM, FIELD AND FIRESIDE for several months, and have always found its Proprietors honorable in their dealings, and prompt in their payments.
CHICAGO PAPER CO.

CHICAGO, Aug. 21, 1883.
The Proprietors of the FARM, FIELD AND FIRESIDE have paid me several thousand dollars for press-work on their paper. I have always found them prompt in all transactions.
A. G. NEWELL.

August 15, 1883.
I am highly pleased with your paper. The information concerning Poultry management alone is worth five times the price of your paper, saying nothing about the valuable Farm information and interesting stories, etc.
W. R. SIMPSON,
SLIPUP, Morgan Co., Ala.

BRAIDWOOD, Ill., Aug. 11, 1883.
I am very much pleased with your paper. Every number seems to me to become more attractive and profitable. I have showa it to several of my friends, who were at once delighted with it.
Mrs. J. F. EHLE.

WAUSEON, O., Aug. 11, 1883.
I received a copy of the FARM, FIELD AND FIRESIDE some days ago and must say that I was well pleased with it. I find it *a first-class journal for the farmers*, of whom I am one. With such an agricultural journal every farmer can receive much benefit.
M. H. HAYES.

MEXICO, Juniata Co., Pa., July 24, 1883.
I herewith send you the names of fifteen subscribers to the FARM, FIELD AND FIRESIDE, which I secured in less than as many minutes.
B. L. SHUMAN.

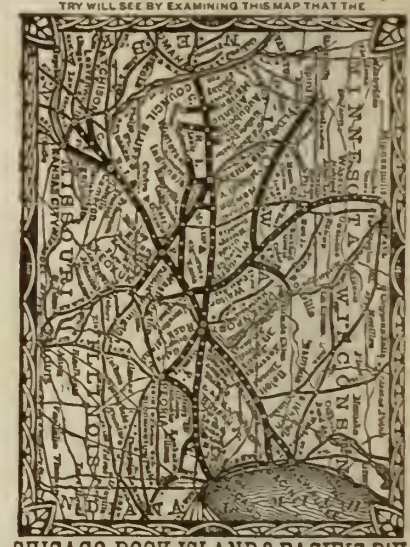
SOUTH UNION, Ky., July 13, 1883.
It is certainly the best paper I ever saw, neat, plain, instructive and beautifully illustrated.
E. L. HOTE.

ILDERTON, ONT., Aug. 3, 1883.
I have lately been a subscriber to your tasty and profitable paper, and must say I am more than pleased with it. I gave my subscription, in the first place, more to have a chance for one of the many presents than for anything contained in the paper; but I find the paper is worth three or four times the money beside all presents.
S. W. PAISLEY.

PORTSMOUTH, VA., July 9, 1883.
I received the papers all right and am delighted. My friends and subscribers say they are surprised at its size and beauty. Every person that has seen the paper acknowledges it to be the best paper printed, and say it is *worth $2 per year.*
TIMOTHY MOSELEY.

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

For detailed information, get the Maps and Folders of the

GREAT ROCK ISLAND ROUTE,

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R. R. CABLE, Vice-Pres. & Gen'l M'g'r. E. ST. JOHN, Gen'l Tkt. & Pass. Agt.

CHICAGO.

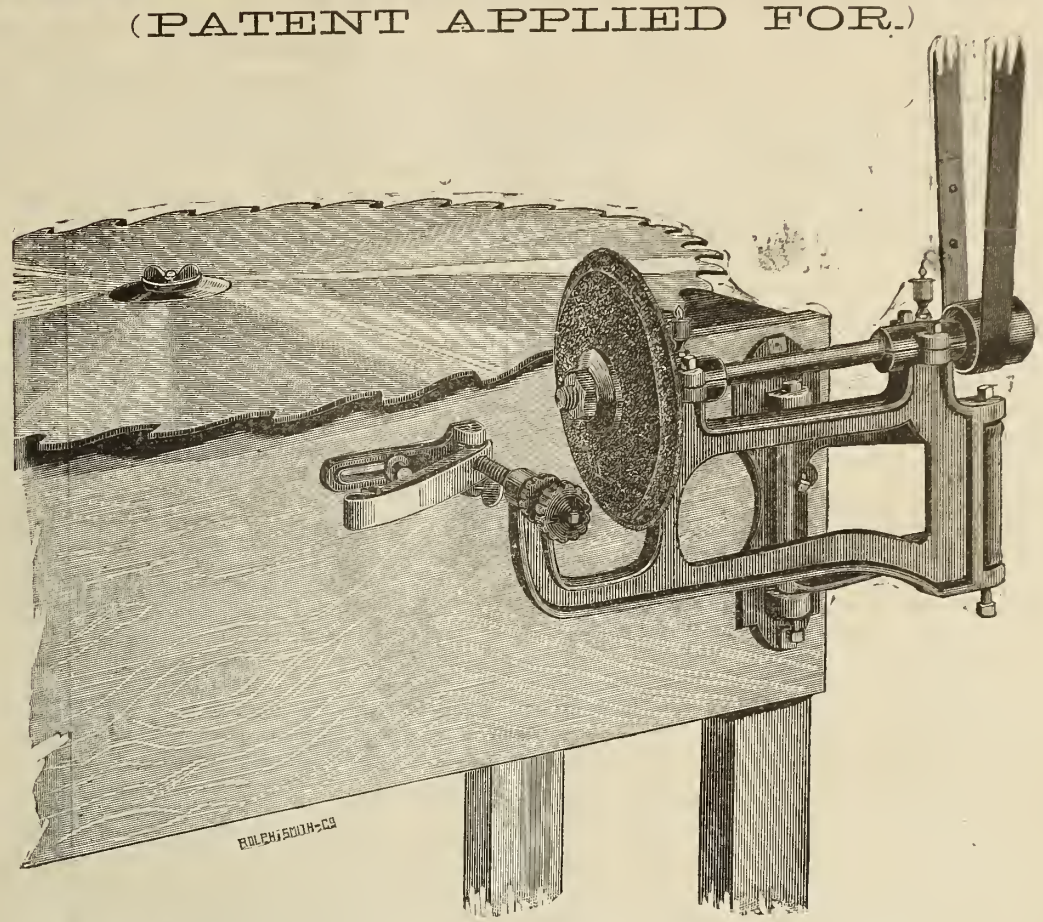
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

Complete!

POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!

JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞ Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

SEEDLING TREES.

Prices of forest-tree seedlings are such as to place them within reach of the very poorest. In fact, as the great bulk planted are of spontaneous origin, they are to be had for mere gathering, in regions where found. When trafficked in, prices range, owing to variety and size, from six inches to four feet, all along from 50 cents to $3 per thousand. Nursery-grown grades range higher. Many millions are now planted annually. The cost of planting depends much on circumstances, price of land, labor, varieties planted, skill in planting and many other minor details. Cottonwood seeding can be furnished in quantity, from 50 cents to a $1 per thousand; box elder and soft maple from $1 to $2, and oaks, ash, walnut, hickory, catalpa and chestnut from $5 to $10. The usual distance apart are by multiplies 1-8 12-16, etc., that intermediate ground may be utilized by being cultivated in other crops until trees are sufficient size to protect themselves, when, in farm parlance, they are permitted to "take the greund."

Most experimenters at first planted tree seeds where they were to remain permanently. Experience has shown this a mistake, for numerous reasons. Principally by this mode uneven stand, growth, grade, size and vigor are to contend with. By planting seeds first in beds and, say at one year's growth, assorting, grading and transplanting permanently, each grade to itself, better results are secured. Same grades as to size and vigor do better together; grow more evenly; the weak are not crowded out or overshadowed by the stronger,—a practical illustration of "survival of the fittest."

By this plan small plants, if healthy, do about as well in the end as large. No variety is known net readily transplanting at one year old. Even varieties of top root characteristics, oaks, walnuts, hickeries and chestnuts are really better, I am convinced, for tap root pruning. By it laterals or fibrous feeding roots are induced. Or if larger sizes are desired before transplanting, root-pruning, by running a tree-digger under the rows and allowing them to remain a year or two longer, good results are obtained. As a rule, however, better success is had by transplanting young trees, when near as possible all the roots are preserved. Small trees cost less to purchase, transport, handle and transplant. Alternating—especially certain varieties—has not given satisfaction. Trees in some respects are not unlike mankind—will not fraternize. For instance, oaks, walnuts and hickories will not fraternize with maples, cottonwoods and elms. When planted near each other, the latter will invariably lean away from the former, assuming a crooked, gnarly appearance, and in the end virtually die out.—*Lumber Trade Journal*,

INTERESTING CASE.

The Assize Court at Ottawa has to-day been occupied with a case having a close interest for shippers, that of the Canadian Pacific Railway vs. Allen Grant, to recover $2,700 for carrying lumber from Mattawa to Quebec. The defendant refused to pay on the ground that he contracted for the delivery of the timber last fall in time to sell in the fall market, and that through the scarcity of rolling stock the timber was not delivered for several months after the contract time had expired. He therefore puts in an offset of $60,000 damages. Judge Armour, in giving judgment, declared that the claim for freight should only have been $2,100, and allowed defendant an offset of $1,400 for losses sustained by defendant's men having to remain idle through scarcity of cars. The question of losses sustained in the sale of timber was reserved for the consideration of the Court of Appeal.

TIMBER LAND FRAUD.

WASHINGTON, Sept. 13.—The commissioner of the general land office said to-day, in reply to enquiries with regard to timber land frauds discovered in California: "I have had a knowledge of these operations for some time, and have had agents out there making investigations. In consequence of reports received from them, I have suspended action upon all timber land cases in California, Oregon and Washington territory, and persons interested are not getting any patents and they will not get any until I am fully satisfied of the honesty of their entries. In explanation of the nature of the illegal operations, Commissioner McFarland said Congress by special act provided for the sale to individuals of separate tracts of timber land in California, Oregon and Washington Territory at $2.50 per acre. Fraud in those cases consisted in the procurement by one person of a large number of such lands, through the co-operation of others who purchased them, only to transfer them to him in clear violation of the spirit of the law. Commissioner McFarland also says that frauds of a similar character have been discovered in connection with entries of coal lands in Colorado; that he now had a force of special agents at work there, and he intended to examine carefully every entry of such land. Land officers in Colorado have been directed to suspend action in coal land entries, until the results of the examination becomes known.

Prospects in the States.

The *Northwestern Lumberman* says:—A glance at some salient points in existing circumstances will make this assumption appear plain. At Saginaw there is a stagnation in sales and shipment that is unwonted for that great source of supply. This is attributed to a lack of choice lumber and an accumulation of coarse stock. Probably this is the correct conclusion to some extent, for we find that the Lake Superior country is sending a great deal of lumber to the East, while more than the usual amount is going from northern Lake Michigan ports and some from Green Bay. Yet the condition of affairs at Albany, New York, Connecticut points and other New England places of consumption must be taken into account as an index of the dullness at Saginaw Valley, as well as the situation in Ohio. At the East trade has been very cautious all the season, and the discretion of handlers seems to increase this fall rather than diminish. Albany reports indicate nothing like a brisk demand. Steadiness, and an ordinary attendance of buyers is the best report that can be given. At great points of consumption, like New York, there is little urgency to business, dealers having only to meet a steady call, and buying simply for that purpose. The demand can almost be termed moderate.

Mill Refuse.

The Wausau, Wis., correspondent of the *Northwestern Lumberman* says:—The disposal of refuse is becoming something of a question. There is so much timber that the slabs, edgings and trimmings are of little account. They are used to fill in and make piling ground, and can be had to burn for the asking. The mill men have gone to no special pains about burning the refuse. It has been dumped from tramways on to the ground, or against the sides of brick walls, and burned without ceremony. The first burner to be put in was that of the Michigan Lumber Company, rather recently built. It is of iron, 35 feet in diameter and 78 feet high. The first glance would lead to the impresson that it was entirely safe, for the smoke floats through the dome of netting that surmounts the burner, entirely free from sparks. The secret of this is that in order to be safe the company placed a second spark arrester directly across the top of the burner, which cannot be seen from the ground. The dome is of one-half-inch mesh, and the inside netting has a quarter-inch mesh. It has worked entirely satisfactorily.

Setting out Fires.

There is a law in Washington Territery against the careless or malicious setting of fires in field, on prairie or in forest, either on one's own land or the land of another. If anybody sets a fire on any land not his own, and it spreads and does damage, the penalty is a fine of $5 to $500. If maliciously any one kindles a fire on his own land with the object of having it spread to the land of another and do damage, the penalty is a fine of $20 to $1,000 and imprisonment for from 3 to 12 months. When a person wishes to kindle a fire on his own land, for the purpose of clearing it of logs, brush, or otherwise, he "shall do so at such time and in such manner, and shall take such care of it to prevent it from spreading and doing damage to other persons' property, as a prudent and careful man would do, and if he fail so to do he shall be liable in action to any person suffering damage thereby to full extent of such damage." Hunters and fishers are liable to the penalties inflicted on others for carelessness with fire. Is it possible that the citizens of a territory are wiser regarding the protection of their timber from fire than the "old heads" of the three great pine states of the Northwest?—*Northwestern Lumberman.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bewsprits, Spars, Staves, &c. measured and culled to Sept. 31:—

	1881.	1882.	1883.
Waney White Pine..	1,967,310	2,135,259	2,279,602
White Pine.....	4,827,905	7,023,350	4,997,208
Red Pine.....	1,762,594	1,328,803	352,067
Oak.....	2,406,731	1,015,525	1,428,630
Elm.....	935,613	576,470	302,526
Ash.....	377,615	213,518	222,108
Basswood	3,519	1,273	2,244
Butternut.....	2,930	2,585	1,028
Tamarac.....	24,237	8,234	5,036
Birch & Maple.....	140,826	263,812	133,766
Masts.....	25pcs	33 pcs	—pcs
Spars.....	— pcs	51 pcs	— pcs
Std. Staves.....	317.7.0.7	315.0.3.25	509.5.2.10
W. I. Staves.....	332.1.3.2	1041.0.0.19	449.1.2.9
Brl. Staves.....	.....	42.8.1.17	87.1.1.27

JAMES PATTON,
Quebec, Sept. 21. Supervisor of Cullers.

Rat Portage.

A correspondent of the Toronto *Globe* says:—Rat Portage is the seat of an extensive lumber trade. The splendid mill of the Rainy Lake Lumber Company was unfortunately burned down a few weeks ago. Jarvis & Burridge have a large saw mill, not yet ready to begin cutting. There are three other large saw mills in the immediate vicinity of Rat Portage. Only about a mile west of the town is the steam mill of Bulmer, Bailey & Co., with a cutting capacity of 80,000 feet per day. A little farther on is Hunter & Co's. mill, rated at 100,000 feet per day; Dick & Banning's mill, with a capacity of 50,000 feet per day; and the Keewatin mills, under the managing directorship of D. L. Mather, having a cutting capacity of 75,000 feet per day.

Trees for Prairies.

Mr. Egleston gives the following as the order of preference as to successful growth of trees grown in Minnesota: First, cottonwood; 2nd, white willow; 3rd, soft maple; 4th, box elder; 5th, white ash; 6th, poplar; 7th, black walnut; 8th, white elm; 9th, butternut; 10th, white oak; 11th, black ash; 12th, hard maple; 13th, Norway pine; 14th, red oak and grey willow; 15th, basswood; 16th, red elm. For value for different purposes the order is as follows: For fuel in the near future, or wind breaks—willows, cottonwood and poplar; for fuel for next generation—maples and ash; for lumber—white oak, walnut, catalpa, ash, elm; for shade—box elder, white elm, ash, walnut, maple.

"Deal."

Readers of technical journals are often puzzled by the use made of the word "deal" by nearly all foreign publications, and some home ones. As generally used it means simply a piece of softwood lumber; but the strict definition of the word, as understood by the English timber merchant, is, softwood timber, imported and sawn to the section of 9x3 inches, or 8x4 inches, or 10x4 inches. Similarly "planks" are 12x3 inches or 12x4 inches, and "battens" 7x2½ inches, or 7x3 inches, all irrespective of length, which varies considerably, and of the country port they come from.—*Wood-Worker.*

Mills Burned.

NEW YORK, 21.—A fire early this morning in the planing mill of Robert Ellis swept through the building with such speed that the workmen were compelled to flee, leaving their coats behind. In less than five minutes the entire mill was in flames. Fifty lumber piles were burned or damaged. G. L. Schuyler & Co. estimate their loss on the lumber at $70,000; Ellis' loss on the planing mill is $15,000.

ROCHESTER, 21.—Crouch's sawmill was burned to-night. Loss $30,000.

OTTAWA NOTES.

There are at present a gang of men busily engaged in fishing oak out of the canal in the vicinity of the Deep Cut. The foreman told a reporter that the oak which they got was worth from sixty to seventy dollars per thousand feet, which is quite an inducement for these fishers of oak.

McLaren's New Edinburgh saw mill is about to be demolished and a new mill erected on the site at a cost of $35,000 The new structure will not, it is thought, be commenced until after the sawing season has closed.

Mr. H. McLean on Sept. 23rd sent a gang of 200 men to the Coulonge to work in the shanties Another gang of shanty hands left on the same day for Michigan.

The last raft of square timber of the season has passed through the Calumet slides.

Gigantic Land Fraud.

SAN FRANCISCO, Sept. 12.—A proposed gigantic land steal, involving several million dollars worth of United States redeemed timber lands, has been discovered. The lands are situated in the northern part of California, and comprised the most valuable redwood timber on the coast. Applications for possession were signed by dummies. Several hundred applications of this kind have been filed with the Government officials here, and it is alleged Government officials are in collusion with the parties engineering the scheme.

THE *Northwestern Lumberman* says:—A proposed gigantic land steal, involving several million dollars worth of United States redeemed timber lands, has just been brought to light. The lands which are situated in the northern part of California, comprise the most valuable timber lands on the coast. Applications for possession have been prepared and signed by dummies. Hundreds of these have been filed with Government authorities, and it is believed that the Government officials are acting in collusion with the parties engineering the scheme. If these schemes should succeed they will control one-sixth of the lumber supply of the state.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfits and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine.

THE
WEEKLY MAIL
Stands far in advance of any other Canadian Paper.
$1 a year

It has the Largest Circulation, the Latest News, both Local and Foreign. A Splendid Story Page. First-class Agricultural Page. Reliable Market Reports. Legal Column Household Department, Children's Department, etc.

THE MAIL
is the great medium for advertisements of
FARMS FOR SALE

Agents Wanted

ADDRESS
THE MAIL
Toronto, - Canada

—IT WILL PAY YOU—

TO SUBSCRIBE

FOR THE

Canada Lumberman

FOR THE FOLLOWING REASONS:

1. It is the only newspaper published in the Dominion of Canada devoted to the lumber and timber industries.
2. It is devoted to the development and utilization of our forest wealth.
3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☞ TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

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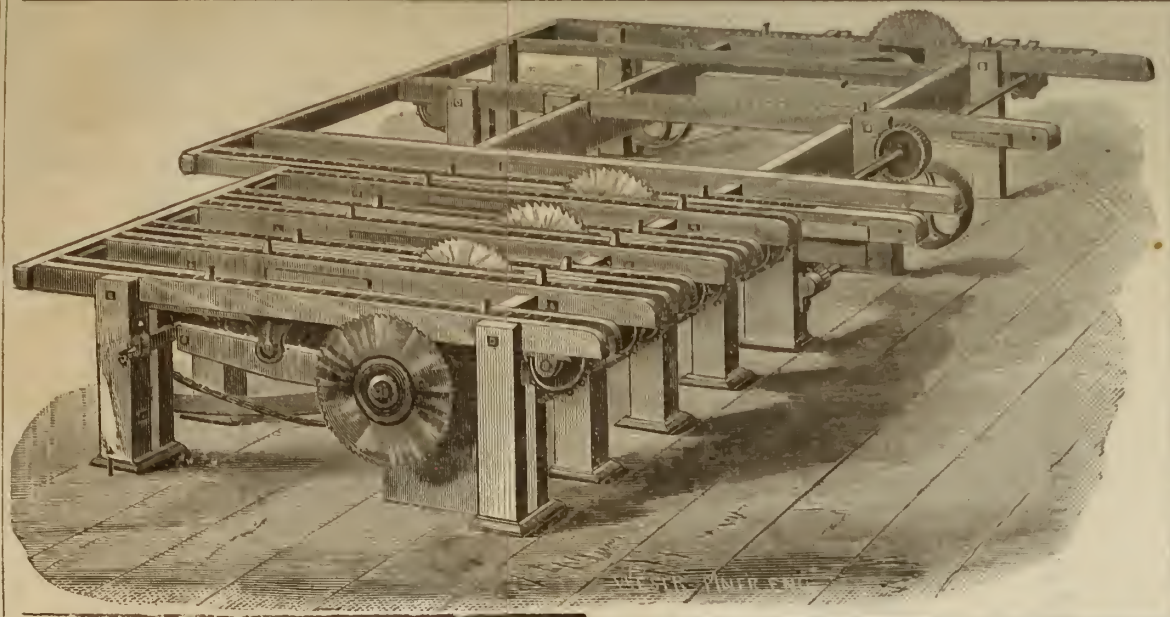

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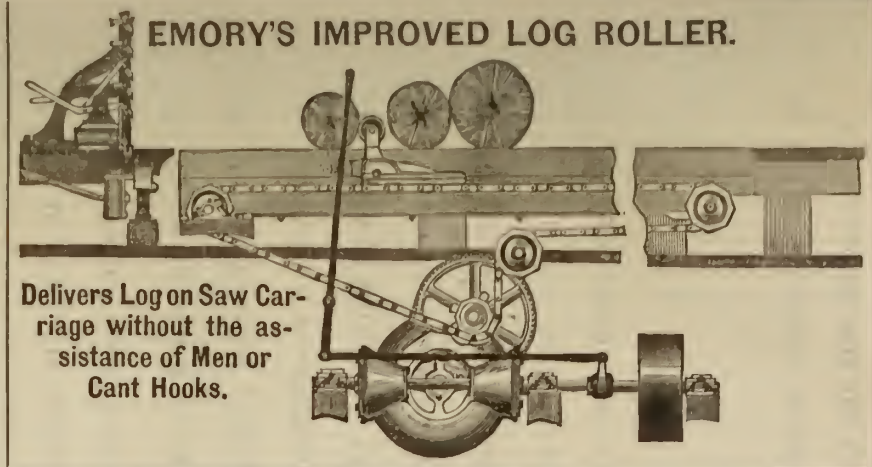

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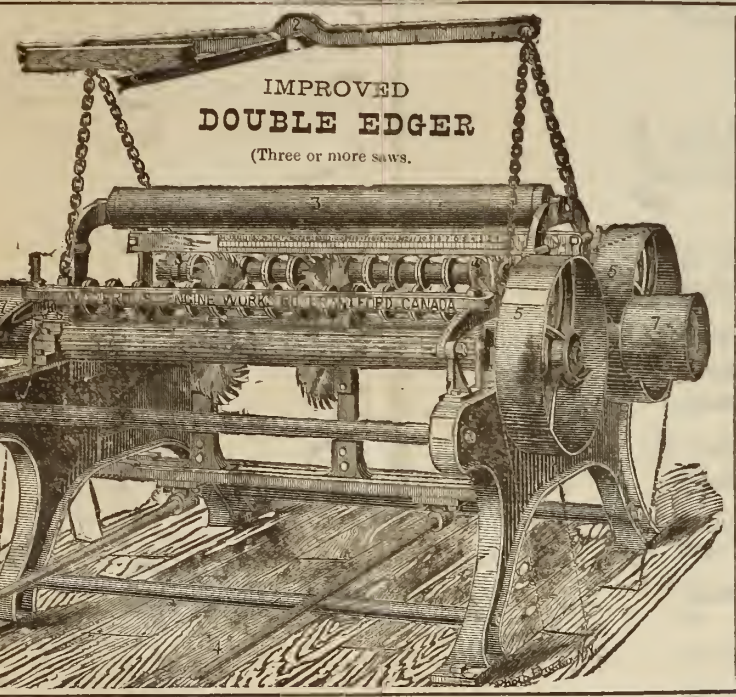

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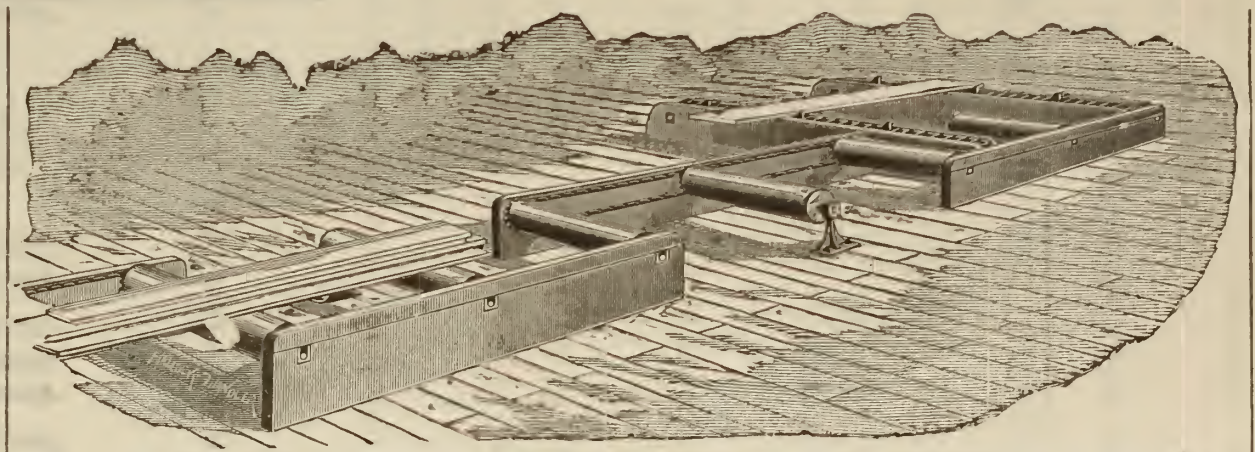

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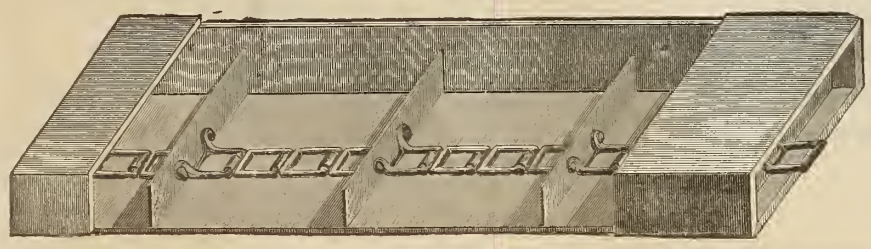

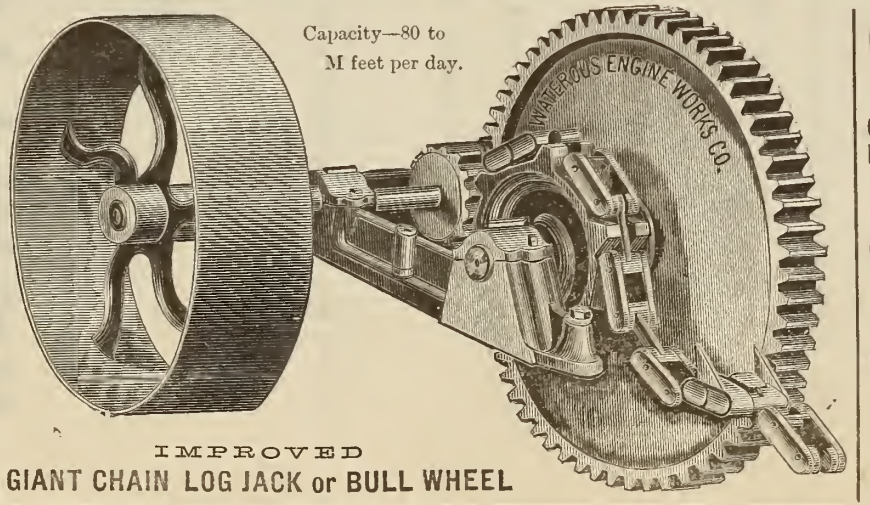

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VOL. 3. PETERBOROUGH, ONT., OCTOBER 15, 1883. NO. 20.

The Ottawa *Free Press* says :—Two trains of umber per diem are now being run out from the city by the Canada Atlantic Railway.

A LARGE amount of lumber will be left over at Manistique, Mich., when the navigation season closes. It is being carefully cross-piled.

THE Menominee manufacturers are not afraid. There is every prospect that an immense log crop will be gathered on that stream and tributaries the coming winter.

THE North American Contracting Company are shipping a large quantity of lumber from Rat Portage to Calgary, for the construction of bridges and culverts on their work.

THE Winnipeg *Times* of Sept. 23rd says :—The steamer Glendevon arrived at Selkirk yesterday morning with two barges heavily laden with lumber, and after depositing them in the harbor she cleared for Fisher River.

A seven-foot rise in the Chippewa river, Wis., on the night of September 25th, cleard out the scattering logs from Paint creek and Little Falls to the Beef Slough works. Between 10,000,000 and 15,000,000 feet were started.

THEY are sawing lumber at the mouth of the Menominee without any reference to the cry of accumulation. At the close of last week the N. Ludington Company had cut 23,000,000 feet, the Carney mill 28,000,000, and the McCartney mill 15,000,000.

THE Ottawa *Citizen* says :—One of the best sales in timber this season was that made recently by Messrs. Barnard & Mackay, of Pembroke, who disposed of a white pine raft consisting of 24,000 sticks to Dobell & Company of Quebec at 29½ cents per foot.

THE *Northwestern Lumberman* says that a sink hole near South Lyons, Mich., has swallowed up three acres of heavy timber. These sink holes are a peculiar feature of Michigan. They have devoured sections of railroad. Several thousand loads of dirt disappeared on the Washburn farm. South Lyons, and another hole on the Clark farm has been taking in 1,200 to 1,600 loads of dirt a day for some time.

NORTHWEST TERRITORY.

We make the follwing extracts from the official report of the evidence of Prof. R. Bell, F. G. S., Assistant Director of the geological survey, before the Committee on Immigration and Colonization :—

Q. What kind of timber is found there?—(James' Bay waters)—On the head waters of the Moose River, white pine is abundant and of good size. Red pine also exists and extends rather further north than the white. Then there is "Jack pine" or "cypress," or more properly the Banksian pine, which, though not a timber tree in its southern extension, becomes so in the northern region, which is its home. In the Albany region, I have seen large groves of this tree, quite different from the ordinary scrubby variety, and from which one or two very good saw logs might be cut. Then there is tamarack of good growth, and white spruce, cedar in the southern part, a great deal of white birch, and other trees, which will some day be valuable.

* * *

Q. If the navigation of Hudson's Bay becomes practicable, it seems to me, if there is much timber in that locality, it will be a valuable item of export. Perhaps you can tell us what the extent of the timber resources of these rivers that fall into Hudson's Bay are—whether there is likely to be a large export of timber from that region?—The Moose River, which is perhaps the most valuable for timber, has some, perhaps twenty principal branches that spread out and cover a transverse area of more than two hundred miles from the neighborhood of the Ottawa westward, to beyond Michipicoten valley. These join together and form several fine large streams running northward parallel to each other, and they unite to form the Moose, which falls into the head of James' Bay. The southern parts of these streams are clothed with white and red pine, and, as you go northward, you have good cedar, spruce and tamarac and the Banksian pine. The southern branches of the Albany also afford valuable timber; but northward of that, I do not think you could say the timber would be valuable for export commercially, as long as we have the other rivers to fall back upon. As to the limits of timber generally, I have paid a good deal of attention to the subject of scientific foresting, and have prepared maps showing the northern limit of every tree that occurs in Canada. The most northern species is the spruce, the limit of which runs from Seal River north of Churchill to the mouth of the Mackenzie River, or in a north-westward direction; and on the other side of the Bay, from Richmond Gulf up to Ungava Bay in Hudson's Straits, and down to the Straits of Bellisle. The whole country to the southward of that line is wooded.

Q. You speak of that being the northern limit. For a considerable distance south of that the timber would not be merchantable?—No. it is scrubby, but it becomes larger as you go south and westward. In my last report there is a map showing the northern limits of thirty of the principal trees. We have about sixty species of timber trees east of the Rocky Mountains and thirty west. There are 340 kinds of timber in North America, and we have ninety of these in the Dominion.

Q, There is a considerable quantity of good timber in that locality, is there not?—Yes, but after leaving the lake a good deal of the forest is burned in the neighborhood of the river.

Q. The Ontario Government hns sent a man to Lake Temagaming?—Yes, that discharges into both the Montreal river and the Sturgeon River. I have gone from the north shore of Lake Huron to James Bay by a zigzag course, following no particular course.

Q. Have you any knowledge of scientific forestry?—As I mentioned before, since 1860 I have paid a great deal of attention to that subject. In that year I published a statement of the limits of the trees and shrubs, particularly in regard to Lake Superior, and wherever I have gone since then I have noted the species of trees existing and tried in every way by information from travellers to ascertain what the exact northern limit of each kind is. I think now they are indicated on my maps so that the lines can be depended on as nearly accurate. This is of great interest and importance, because it shows the limit of our wealth in timber, and is a valuable indication of climate, and also, because the distribution of trees suggest some important geological problems.

Q. Have you noticed the map showing the northern limits of some kinds of timber prepared by the Interior department?—It was a very bad copy of a temporary manuscript map of my own.

Q. It is not true as to the northern limit of some timbers in Ontario?—No, not strictly true. I have altered it in some places since that copy was made.

Q. White oak occurs 100 miles further north than is shown there!—Yes, to the northern end of Lake Temiscamingue.

Q. If a country was denuded of its timber by fires, what effect would that have on the climate and rainfall?—If it was entirely denuded, it would have a considerable effect, but if it is only denuded in comparatively small areas each year, the average rainfall remains the same.

Q. In a series of years the aggregate effect would be cumulative, I suppose?—Yes, the effect of one year would influence the next year and so on.

Q. Do you think it is because the timber is getting limited that the streams are falling off, because there is nothing to hold the water and it rushes down more rapidly in the spring, and in the summer gets lower?—Where a great deal of clearing has been done, as in parts of western Ontario, it has that effect. Perhaps the aggregate rainfall does not differ, but the water flows off rapidly and is over, whereas formerly the trees shaded the ground and otherwise retained the moisture.

Q. It is not so much that the timber is being stripped?—Perhaps that influences the rainfall to some extent, but another reason is, that the water runs off more rapidly from cleared land than from forest land. Every log yiel across the little streams in timbered land helps to keep the water back.

Q. Is not the rainfall much less on the broad, open prairies—at Moose Jaw, Regina—and so on, than in Manitoba proper?—I think it is considerably less.

Q. How do you account for that?—It is owing to the country being denuded of its timber?—Its elevation has something to do with it, and probably the currents of air that bring the moisture from the south cannot precipitate it till they reach a more northern latitude. The rainfall is not regular. You cannot draw regular lines on a map to represent it. It would be represented rather by irregular lines and areas.

Q. You think it more influenced by currents of air than by the timber limit of a country?—Both will affect it, When heated air, bringing a large vuantity of moisture comes to a country, it may be induced to precipitate the water in the way of rain from different causes chilling it. It has been found so in Europe. The higher mountains and the proximity of cold lakes condense it, while the heat of an extensive bed of sand will prevent it condensing, The heat from the ground keeps the moisture in suspension in the air, and it is carried on.

Q. Do you believe the planting out of the timber in those regions of the Northwest which are now timberless would improve the climate? It would increase the rain probably, but is a problem whether timber would grow there. Where it does not grow naturally, it is doubtful whether it would grow at all. In approaching the open country the tree lines do not end abruptly as if the prairie country had been cut out by fire, but tend southward before they reach the beginning of the prairie, and are replaced by western species, showing that the present condition of things has existed for an immense length of time.

Q. Do you imagine that on our treeless prairies of the west, it is impossible to cultivate forests?—Some worthless trees for timber like willows or cottonwood would grow, but they would never amount to much. Coniferous trees and hard woods, I think, will never be induced to grow permanently where they are not found naturally,

Q. That would limit very materially the utility of the science of forestry?—To that extent. But it has to do with keeping up the existing forests.

Q. The greatest arguments in its favor have been used by the people of the Western States as to the planting out of trees?—It is to be hoped they will succeed, but it is very doubtful to what extent, I think, as yet. It is very hard to alter the face of nature. Generally the condition of things we find existing is what has long existed and must continue to exist. Otherwise we should find a greater tendency to change.

FORESTRY SCHOOLS.

So much interest has been excited by the recent discussions on the subject of forestry and by the fact that England alone of all European nations possesses no school of foresty, that the following resume of those now in operation on the continent may be useful. Austria heads the list with nine schools—viz., the Imperial High School of Agriculture and Forestry at Vienna, with 6 professors and 329 students; the Eulenberg school, with 6 professors and 50 students, the course lasting two years; the Weiswasser school, with 5 professors and 80 students; the Lemberg school, with 12 professors and 50 students; the Aggsbach school, near Melk, with two professors and 24 students; the course of forestry in the technical high school, of Gratz; the Syria Forest Culture school, wirh three professors and 26 students; the Carinthia school; the Vorarlborg school. Prussia has three institutions, commencing with the Royal Forest academy at Neustadt, Eberswalde, with a director, 14 professors, and other assistants. The course is two and a half years, and the number of students about 67. The Munden Royal Forest academy has a director, 10 professors, and 78 students, The Forest school at Groose Schemebeck and the forestry courses to the army forestry battalion are for the training of lower forestry officials. At the former school are 4 professors, at the latter 11, all of them practical foresesters. Saxony has an excellent forestry academy at Tharand, with ten professors and assistants. In Wureemburg instruction is given at the Royal Agricultural academy at Hohenheim and the University of Tubingen. In Baden the forestry department of the Carlsruhe Polytechnic forty students. Bavaria has a forest academy at Aschaffenberg, with a director and seven professors, in addition to which are six chairs of forestry in the University of Munich; Hesse Darmstadt has a forestry institution attached to the University of Geissen; and Saxe-Weimar has possessed one since 1808, with a director and four professors. In Switzerland the department of forestry forms the fifth division of the Federal Polytechnic school at Zurich, in which are thirty students. France possesses a school of forestry at Naney, and one of the forest guards at Barres, in addition to several agricultural schools and agronomic industrial school, in which forestry is taught. Russia has four schools—viz., the Agricultural and Forestral academy at Petrovsk, near Moscow; the Agronomic institute at St. Petersburg, with courses in silviculture; the Forest school at Lissino, and the forest division of the Agricultural institute at New Alexandria. There is an Italian school of forestry at Vellombrosa, a Spanish school of forest engineering, at Staff Lorenzo del Escurial, near Madrid; a Danish school, attached to the Royal Veterinary and Agricultural college at Copenhagen; and a Swedish forest institute at Stockholm, besides thirteen private elementary school. In the United States forestry is taught in the state agricultural college at Lansing, in Michigan state, which possesses a good labelled arboretum and a large collection of native and exotic trees under cultivation. Great Britain alone, which needs more attention than any other country in the preservation of what forests she has left, possesses no school whatever.—*London England Times.*

"THE SAGINAW OF THE WEST."

A correspondent of the *Northwestern Lumberman* says:—"The town of Selkirk is situated on the Red River, 22 miles from the city of Winnipeg and 25 miles from the mouth of the river in Lake Winnipeg. The town site is the most magnificent in this part of the country. The town claims at the present time the most beautiful park in the Northwest, and is already becoming famous as a pleasure resort, since the Canadian Pacific Railway opened its line on the west sides of the river. Week after week brings train loads of excursionists in search of pleasure, everybody going away well pleased with the place.

The town contains about 2,500 inhabitants, and at its present rate of growth will more than double that number in two years. Almost every nation of the globe is represented here, and all are prosperous, Costly residences meet the eye on every side, and that the people are satisfied with their prospects is shown by the look of contentment that rests on every face. This is a very peaceable place, the policemen are almost unnecessary, and our police court is very seldom used. Selkirk boasts of all the modern conveniences and luxuries. Its attractions are various. Just outside the town is situated a fort of ancient times, looking grand in its decay, a rare spot for the brush of an artist. North of the town is situated the great St. Peter's Indian Reserve, and at every hour of the day you may see the aborigines coming into town with their wagons loaded down with game and fruit, with which the country abounds. Some live by hunting and fishing; others are wealthy farmers. In appearance they are repelling, being of coarse and swarthy features and with jet-black hair. Men and women alike wear long hair, plaited and hanging down to their waists, though some of the wealthier ones are very stylish.

There are six steamers plying between Selkirk and points on lake Winnipeg, chiefly employed in the lumber and timber trade. The Northwest Lumbering Company's mill is the only one in Selkirk. They manufacture all kinds of lumber, rough, dressed and matched, lath and shingles. Their logs are obtained from Lake Winnipeg and its tributary rivers, and towed up the Red River. They have also a mill on Lake Winnipeg, where there are five mills and one shingle factory, all owned by different lumber companies. The Selkirk company contemplate buying a steam tug for their own use in the spring. The officers of the company are Alex. Moffat, president, and T. H. Carman, secretary and treasurer.

All the lumber, lath and shingles from lake Winnipeg comes to Selkirk to be shipped further west by rail. North of lake Winnipeg it is wooded country, covered with dense forests; white pine, spruce, tamarack, oak and poplar being the principal varieties. It also boasts of some fine cedar valleys along its rivers. There is a ship-yard here, building barges to meet the demands of the lumber traffic. Selkirk is destined, at no distant day, to be the Saginaw of the West. It has, also, other advantages. The country to the northeast and west is a magnificent farming and stock-raising country. Already several stock ranges have been started in this vicinity. There are three large brickyards in full blast here, and a stone-quarry to supply the building stone for our western cities. We have railway communication now on both sides of the river. A ferry at present serves for transit across the the river, between the east and west parts of the town, but negotiations are afoot for the construction of a railway bridge, which will add largely to our commerce."

INTERNATIONAL FORESTRY EXHIBITION

We have already stated that an International Forestry Exhibition is to be held at Edinburgh next year. A short time ago the Executive Committee of the International Forestries Exhibition, now open in London, resolved to hold an International Exhibition of Horticulture, Floriculture and Forestry at South Kensington in 1884; but representations having been made to them by the Lord Provost of Edinburgh, on behalf of the promoters of the proposed Forestry Exhibition, in which it was pointed out the simultaneous holding of two such Exhibition would prove materially injurious, they decided to postpone it for a year. Consequently, the Edinburgh Exhibition will not have a rival.

The Edinburgh *Courant* announces that Her Majesty the Queen has been graciously pleased to extend her patronage to the Exhibition, and it is also to have the patronage of important public bodies and a large number of noblemen and gentlemen in different parts of the country. The Executive (the Marquis of Lothian being president) are now issuing their programme and classification to Foreigu Ambasadors, Colonial Governors and others, requesting their co-operation, assistance, and suggestions. The same journal learns that from communications which have already taken place, there is every reason to believe that the wishes of the promoters will be cordially responded t , and that the Exhibition will come up to thei most sanguine expectations. The *Courant* says the exhibits have been arranged into eight classes, as follow:—Class I., Practical Forestry; Class II, Forest Produce, raw and manufactured; Class III, Scientific Forestry; Class IV., Ornamental Forestry; Class V., Illustrative Forestry; Class VI., Forest Literature and History; Class VII, Essays and reports; Class VIII., Land Collections. It is pointed out that under the first-class are included implements and tools used in forestry, draining, enclosing, etc.; and also surveying instruments and appliances; models of foresters' huts, charcoal kilns, timber slips, slnices, dams and weirs; plans of river embankments, rafts and appliances for floating timber; models and machinery for transplanting timber and transplanting trees; sawmills—wood-working and pulp machinery in motion or otherwise; and fencing materials. The Forest Produce Class will embrace specimens of woods, whether adapted for general utility or only purposes of ornament. and whether they are of homc, naturalized, or foreign growth. Included are woods for railway purposes and pavements, carving or basket work, and all tanning and dyeing substances, drugs, spices, charcoal, peat, cones, seeds, and fruits of trees. shrubs, etc. In Class III., that of Scientific Forestry, are included botanical specimens of forest flora, microscopic sections of woods, parasites—fungi and lichens injurious to trees, forest fauna, injurious to woods, entomology—useful and noxious insects and damage produced, preservative processes applied to timber, geological specimens and diagrams illustrating the different formations adapted to the growth of trees, fossil plants, trees found in bogs, etc. Growing specimens of rare and ornamental trees and naturalized species—in tubs or otherwise, and rustic work—arbours, bridges, seats, &c., will find a place under the class for ornnmental forestry; while Class V., to which special attention is invited, will include paintings, photographs and drawings of remarkable and historical trees; foliage and scenery; delineations of trees in their native countries or of recent and important introductions; illustrations of photographs showing effects of blight, accident, or any abnormal condition, including that of parasitical plants; and sketches of work and operations in forests. The forest literature and history class is intended for publications of all kinds on forests; and also (to which special attention is invited) working plans of forests, and plantations on estates, valuations on estates, etc.; and maps, charts, etc., illustrative of the geographical distribution of forest trees, and their altitude. Premiums are to be offered for essays and reports on different subjects.

The Exhibition will afford Canada another favourable opportunity of displaying specimens of her chief sources of natural wealth, for which purpose Parliament may be requested to vote a sum of money.—*Ottawa Citizen.*

WILL THE CUT BE CURTAILED?

That a curtailment of lumber operations in the woods is the great desideratum for the season which is just about to commence will not probably be disputed. No man who understands the situation or has given the subject anything like a thorough consideration will for a moment attempt to question the excellence of such a policy on the part of the manufacturers. The law of supply and demand in the lumber trade, like every other business may be considered an unfailing barometer as to prices and profits, and if the supply can be kept in the slightest degree deficient, little apprehension need be felt for the prosperity of the industry; at least every manufacturer may rest assured of remuneratiou for the business performed. But the desirability of a certain line of action on the part of a large body of business men does not always secure the much needed concert of action. Lumbermen being generally very similar to any other class of business men, their movements are generally governed by their pecuniary interests. Besides the lumber industry is of such enormous proportions, and its ramifications extending "into the uttermost parts of the earth," any concerted movement becomes decidedly uncertain, if not impossible. Movements inaugurated during the past season, also, in regard to railroad shipments from initial points direct to the distributing points, is destined to work almost a complete revolution in the trade so far as any dependence of one section for its stock on the ability of another section to supply is concerned. It will, therefore be seen at a glance that any concerted action on the part of the manufacturers of Wisconsin to control prices on the law of supply and demand might easily be thwarted by their brethren in Michigan who are engaged in the same line of business, and *vice versa*. However much may be the desirability, therefore, of a curtailment of operations, the cupidity of human nature usually governs individual action regardless of the general interest; and it is not surprising to learn that large manufacturing concerns are constantly increasing their capacity not only by additional motive power and machinery, but are also erecting new works more adjacent to the timber limits under their control. If the present capacity for output could be simply maintained without increase, the lumber business might be considered beyond the reach of disaster because of the continually increasing demand through the influx of population in the west and northwest, as well as by the natural growth of thriving cities in the east. The south also is just awakening to an era of increased prosperity which will doubtless very materially increase the demand; but there is a positive and absolute certainty that the latter will be at once met by drafts on the magnificent forests in the southern states, which precludes any advantage to the trade in that direction.

The absolute and unvarying certainty of the law of supply and demand may be understood by an examination of the business the past season. The low percentage of first-class lumber, not only in the Saginaw valley district, but in every other direction where manufacturing is extensively engaged in, has kept the demand urgent and prices unwaveringly firm; while the great percentage of coarse lumber at every point has depressed the market, weakened prices, and otherwise injuriously affected the trade in that class of stocks. But with these recent facts staring the manufacturers in the face, it is very doubtful if the policy will be generally adopted of curtailing operations providing it should prove a favorable winter for logging operations. Notwithstanding the fact that we see the opinion generally expressed in our exchanges that there is to be a general curtailment, it is quite probable that "the wish is father to the thought." In support of this opinion, we may refer to the Saginaw *Courier* as an illustration. In a recent addition of that generally reliable sheet on matters pertaining to the lumber business, it expressed the opinion that there is to be a very material reduction in the coming winter's crop of logs; and as if in refutation of any such probability it states that signs were posted all over that city of "Men wanted for the woods." When we take into consideration the fact that it is barely time for the first notes of preparation for a war on the giants of the forests, and that men are thus eagerly sought after, it cannot be considered as very assuring that the cut of logs is liable to be very materially curtailed, providing the clerk of the weather does not lend his aid in that direction, however desirable such a policy may be.—*Lumberman's Gazette.*

FULL OF TIMBER.

The *Timber Trades Journal* says:—It is amusing sometimes to look back at the old trade predictions and compare them with the state of things as they turned out afterwards. The *Standard* newspaper, ten years ago, accurately described the state of the timber trade in England at that date. But its views of the course which supply and demand were bound to follow have been sadly, or perhaps we should say fortunately, negatived by the course of time. In 1879, six years later, prices were lower than they had been in 1872, and spruce was sold in Liverpool in the latter part of the summer of that year at about £6 per standard by the cargo, and it is not even now a paying commodity to import, as the supply is too large for the demand, though a better state of things is shortly looked for. As to the anticipated difficulty of getting supplies from northern Europe, we need only refer our readers to the present state of the market. The problem of the day is how to restrict them to moderation.

With these introductory remarks, we reprint from the *Evening Standard*, of the 7th February, 1873, the following paragraph, which has

something of the nature of a curiosity about it now:

"Rise of Prices in Baltic Wood.—For some weeks there has been an enormous rise in the price of wood in the north of Europe, recalling that which occured at the end of the year 1853. Taking for a basis the prices current at the beginning of 1872, the increase already amounts from 30 to 60 per cent. in Sweden, and 20 to 50 per cent. in Norway, varying according to description and qualities, and from all accounts we must expect from day to day still higher prices. That the price of wooden goods would infallibly advance in Sweden and Norway had been for some time expected, in consequence of the continually increasing distance of the forest districts from the coast, the difficulties always arising in cutting for sale and transporting the wood from the forests to the saw mills, the enhancement in value of the forests in growth, with the expense of maintenance and manufacture, and especially from the enormous increase of exportation to various countries, an increase which has now assumed such proportions as to exceed greatly the most favorable anticipations of the growers in the north of Europe. We must add that a belief prevailing in the Scandinavian countries that the total production of wood, however much it may be increased in 1873, will not in the presence of such numerous inquiries, suffice to meet all requirements, still exercises a certain influence, and tends to exaggerate the demands of sellers. At any rate, it is evident that unless the full prices asked are paid importers will not be able to get a single cargo for the opening of the coming season."

It seems so natural that as timber, which takes a lifetime to grow to merchantable size, but may be cut down in a few minutes, should become scarcer and less accessible, as the enormous demand for it increases, that the argument seems unassailable. But the facts of the day which are immediately before us demolish it altogether. In spite of all that has been and is done to destroy and consume the forests of Europe and America, the world is full of timber till.—*Timber Trades Journal.*

THE AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett, & Co.'s lastest report, dated Melbourne, July 30th, says:—Deliveries from the store-yards have been above the average at this season of the year, indicating that a large consumption is still going on. Had shipments to this market continued on a moderate scale, there is no doubt prices would have continued remunerative to shippers; but the excessive quantities of t. and g. flooring, lining, and weatherboards from the United Kingdom, and advised coming forward from Norway, have had a most depressing effect on prices for these lines, and dealers now will only purchase for their bare requirements. American lumber.—Sales ex Emily F. Whitney, Cashier, and Minnie H. Gerow. Prices realized fairly sustain last months quotations, white pine shelving being quitted at £10 2s. 6d. to £12 2s. 6d.; dressed 1 in. clear pine, £15 15s.; Michigan clear pine, 1¼ in., £12 17s. 6d.; 2 in. £15 15s. to £15 10s.; 3 in., £16 to £15 15s.; 4 in. £16 2s. 6d. to £16; 10 in. w. p. t. and g. ceiling, £8 2s. 6d. to £3 17s. 6d per m. ft. super. Stocks held by the trade are moderate. The cargo ex Monarch, DOM brand, is advertised for sale by auction on 10th proximo, and should realize an advance on late rates. Most of the trade, however, hold stocks sufficient to carry them on until the new season's goods arrive.

Messrs. C. S. Ross & Co. in their report say:—The sales of building materials have not been equal to the usual average per month, and prices for some lines are lower. The demand for consumption is reported to be much lighter than that of the previous month, and as the weather is not favorable for building operations the deliveries will not be large for the next quarter. Sales have been well attended, but the trade being heavily stocked the bidding has not been brisk, and a considerable portion of the offerings has been withdrawn. The stock of timber in hand is far heavier than usual at this season, and unless shipments cease very low prices must result. The arrivals have been the Blair Hoyle, Loch Vennachar, Mylomene, Eaton Hall, Mermerus, Miltiades, Cuzco, Glenmorven, Kent, and Catania, from the United Kingdom, with flooring, red deals, &c.; Minnie H. Gerow from New York, and Scottish Prince from Boston, with spruce deals, &c.

THE PACIFIC COAST.

The San Francisco *Journal of Commerce* speaks as follows of the Pacific coast lumber business.

But very few of the people of the Pacific coast, unless it is those directly interested in it, are aware of the immense importance of the lumber trade, On Stuart street, from Market to the Pacific Mail dock, are seen lumber yards, and here and there are seen vessels unloading lumber at the wharves, and this is all, but these piles of lumber, these modest little coops of offices represent thousands upon thousands of acres of land, millions upon millions of capital, giving employment to thousands upon thousands of hands, all the way from Santa Cruz on the south to Alaska on the north. Here are represented, with few interruptions, a chain of forests of valuable timber—mines of treasure to their owners—mostly all owned by San Franciscans, operated from here, furnishing the people of almost the whole world with valuable lumber. This chain or range of forests begins with a span at Santa Cruz, and expands in Mendocino and Humboldt counties, widens into vast forests of white pine in Oregon and Washington Territory, and finally terminates in a wilderness of timber in Alaska. The magnitude of this great interest becomes apparent on investigation. White-winged vessels are silently arriving, bringing to San Francisco a portion of the treasure secured from these forests. There is no speculation in this trade, no digging and delving in dark holes for hoped for treasure; the forests are there, the lumber is needed, and the product is sure. The lumber business of the Pacific coast takes rank where it justly belongs—alongside of her wheatraising industry.

California produces immense quantities of redwood, the only section on the known globe where this useful and even ornamental wood can be found. Herc laurel equals the far-favored mahogany, while the sycamore is becoming known as a most useful and ornamental wood. Puget Sound and Oregon furnish pine and cypress, and all these woods are found in apparently inexhaustible quantities. In fact it is stated with, we believe, the utmost fairness, that the thirty years' consumption of lumber on this coast has so far made no preceptible impression upon our immense forests, and that not one-fiftieth of our lumber has been touched. It is asserted by some, but denied by others, that the redwood and pine on this coast will reproduce itself in thirty years, but be that as it may, there is no danger that the supply of lumber on this coast will become exhausted in the lifetime of our children, or our children's children, and the development of the lumber interest, the new forests opened, new mills erected, new markets for their product found, will afford ample opportunity for the safe investment of capital for years to come. In fact the lumber interest of this coast is in its infancy; we are but at its threshold, and its possibilities cannot be foretold. In it at the present day are men who have grown gray in the service, but we can safely say they are men of honor, honesty and probity; they are men who have assisted in developing and expanding one of the greatest interests of the coast, and they are entitled to every praise for their indomitable energy, and are to be congratulated upon their success.

Erie Canal Trade.

The Tonawanda *Herald*, dated September 27, stated that an immense fleet of Western barges arrived the Sunday and Monday previous. lumber laden, with the docks already well filled because of the recent scarcity of canal boats. Freights went up a quarter, and the rate paid all week so far has been $2.75 to Albany and $3.50 to New York. This, with tolls off, is $1 better than this time last year, and the boatmen are as happy as clams at high tide. No waiting for loads, and everything serene. Those who get loads now have cause to feel glad the coming winter.—*Northwestern Lumberman.*

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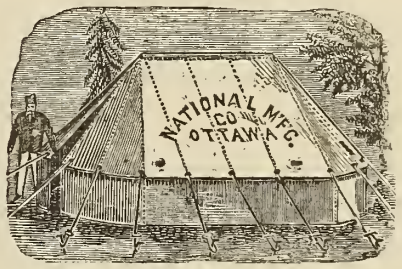

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THE COARSE LUMBER PRODUCT.

A prominent and long time lumber commission dealer, of East Saginaw Michigan, has expressed his deliberate opinion about the condition of tho lumber business in eastern Michigan, which brought out some points worthy of comment. Among other reasons for the existing depression in the lumber interests of Saginaw valley and the Huron shore, this commission man said that Norway lumber had gone so low that there is no margin on stumpage, some sales of lumber having been made at an actual loss of $2.68 a thousand. This decline of Norway stock, he says is a clear case of over-production. The figures of last year, and those of the present, on this stock, were too high to stand the strain of the load of product that was put on the market. That is the reason why so much Huron shore Norway has been coming to the Chicago market this season, and why dry dimension of this description has sold from $9 to $10 when green east shore white pine was selling for the same money. Taking into consideration the difference in freight between Bay City, Tawas, An Sable or Alpena, and east shore ports on this lake, and the difference of $1 a thousand between dry and green lumber, Norway dimension has virtually sold on this market the present season at $1.50 less than white pine stock.

Added to the overproduction of Norway in eastern Michigan, is the unwonted accumulation of coarse white pine, which has been held too high for the market demand, and has thus remained a drug in the hands of holders. The larger portion of this coarse stock at Saginaw goes to Ohio; but dealers in that state this year have largely refused to take it, because they considered prices were too high. Consumers have turned their attention to poplar, whitewood, and other varieties of timber native to the state, and production of these kinds of lumber have thus been greatly stimulated. Tennessee, West Virginia and Kentucky have also been drawn upon for supplies. Poplar, especially, has been used to a surprising extent as a substitute for pine.

While coarse pine in Eastern Michigan has become a burden to movement, good lumber is in demand in excess of supply. This class of stock goes mostly to Albany and the East. But while it is very gratifying to the manufacturers and handlers of good lumber to know that such property is "good as tho wheat," and is in no danger of a decline in price, it is less pleasant to contemplate its rapid decline in proportionate quantity. The commission dealer referred to is of the opinion that the average stock of Saginaw river lumber does not contain a tenth as much of the upper qualities as it did five years ago.

The growing scarcity of good lumber has led the Saginaw manufacturers, as it has those on the western side of the state, to conclude that coarse stock must be worth proportionately as much as the higher grades. This feeling no doubt grows out of the fact that it costs as much to log and manufacture the poor product as it does the good—and perhaps more, when the relative value of stumpage is considered. But it should be borne in mind by the saw-mill owner that the merchants and consumers will have their say about the value of coarse lumber, as they have this year. They will not continue to take all the coarse stuff the manufacturers may offer, and at prices that the latter may wish to realize in order cover costs and afford a profit. As was seen before in the *Lumberman*, the price of inferior lumber cannot be forced above a certain point. Clear pine may one day be worth much more than now in this market, while second common may not be worth more than it is to-day. The reason of this is found in the fact that the common uses of coarse lumber do not admit of prices above a certain range being paid for it. Besides there is an abundance of substitutes for coarse white pine, such as the poplar and whitewood of tho middle and southern regions of tho country, the basswood and hemlock of the North and Canada, spruce, Norway pine and the mountain pine of the Rockies. Railroad facilities for reaching sections where all these timbers abound are being extended, and distribution is becoming constantly easier and cheaper. The Saginaw manufacturers are already beginning to realize the competition of whitewood and poplar in Ohio and Indiana. Choice pine lumber may vault upward, but a poor quality must always sell for a moderate price until the supply is exhausted. Owners of stumpage might as well figure of this basis from now out.—*Northwestern Lumberman.*

BIG TIMBER.

The California *Architect and Building News* has the following: Hundred of visiting Knights Templar had an opportunity, while in this city, of seeing two of the largest pieces of timber that ever passed through the hands of the mill men. It was amusing to hear the remarks, and watch the various changes in the different countenances caused by a survey of probably the finest pieces of timber that was ever sawed. One piece is 144 feet long by 18 inches square, and contains 3,456 feet of lumber. For over 100 feet there is no knot that a five cent nickel would not cover, and in the whole piece of timber the largest knot can be covered by a half dollar. It is wonderful that a stick of timber of the size given should be so remarkably clear of knots. Its companion is of the same length, 16 inches square, and contains 2,352 feet. When it is taken into consideration that tho tree from which the first mentioned piece of timber was taken was cut several feet above the ground, and that 150 feet from the cut made to foll the tree it was of such a size as to enable the mill man to saw the log so as to produce a piece of timber of the size given, one can imagine the size the butt must be, and partly comprehend the amount of labor required to handle such an immense stick. It costs about one-half more to land in our wharves a stick of timber of the size mentioned than it does of ordinary lengths. These pieces of timber were sawed at the Port Blakely mills, Washington Territory, the owners being Renton, Holmes and Co., the well known lumber merchants of this city. A short time ago there was received in this city a stick of timber 104 feet long, 24 inches square, and almost free from knots. After its arrival here it was allowed to be on inspection for a short time, when it was taken to one of mills and sawed into joists, as the purpose for which it was manufactured was given up and no use could be found at the time for a stick of timber of such largo dimensions.

CALIFORNIA REDWOOD.

The San Francisco *Bulletin* says:—J. D. Walker, of the firm of Falkner, Bell Co., is among the overland passengers announced to arrive in this city. This gentleman for the past two months or so has been on a visit to Scotland. During his absence he has successfully negotiated the transfer of a large area of California timber lands, for a sum aggregating between $1,500,000 and $1,750,000, to a recently organized corporation in Scotland known as the California Redwood Company, of which it is understood the firm of Falkner, Bell & Co. will be the representative agents on this coast. The purchase embraces land, mill, tugs, embarcaderos, and other incidental accessories to the general lumber trade. The main object of the new enterprise is to meet the demand that is developing at Eastern and European capitals for the fine redwood lumber for interior house finishing and ornamentation. Woods, like everything else, it is to be presumed, have their ages or periods. One generation will use nothing but mahogany. Another give walnut the preference. Laurel, rosewood, and oak each come more or less in prominence as caprice or fashion may require. It is only of late that outside attention has been given to the products of the Pacific coast, and California redwood has rapidly gained favor among those by whom the study of fancy woods is accepted as partaking somewhat of æsthetic character and taste.

In the whole world there are no known redwood forests outside of California. Carefully prepared official estimates give the quantity at 25,825,000,000 feet, and this amount is comprised in the coast belt that extends from Humboldt County, just below the Oregon line, down as far south as the Mexican border. It it a significant fact, however, that one-fourth more finished lumber, suitable for interior house-work, can be obtained from Humboldt timber than from timber grown from any other county in this State. This circumstance may account for the investments of the California Redwood Company being confined to Humboldt County. Unlike many other kinds of trees, redwood stumps can be utilized to profitable advantage. For veneering purposes slices from these stumps are said to be highly prized, and may probably in time prove almost invaluable.

The capital stock of the California Redwood Company is nominally £900,000 or about $4,500,000. There are 90,000 shares of £10 each, of which 60,000 shares are classed as preferred and 30,000 shares as ordinary. One-half of the stock—say, $1,225,000—has been paid up in cash. It is understood that debenture bonds will also be issued to the extent of £450,000. The prospective calls for land area approximating some 70,000 acres, though probably 50,000 acres will more nearly represent the land involved. From advanced sheets of the Census Bulletin issued by the Government we are able to give the total amount of redwood in California, measured by sections, as follows:

	Feet, Board Measurement.
From Oregon boundary line to Redwood Creek	800,000,000
Redwood Creek to Mad River	9,000,000,000
Mad River to Eel River	2,145,000,000
Eel River to Mattole River	4,450,000,000
Mattole River to Cotonana Creek	200,000,000
Cotonana Creek to Russian River	7,630,000,000
Santa Cruz Region	1,550,000,000
Total	25,825,000,000

It is considered as somewhat remarkable that the redwood belt begins just below the Oregon line and stops just before reaching the Mexican boundary of lower California.

As it may be of interest to known how much redwood lumber is cut annually in this State, we give the quantity that is calculated to have been cut during the census year ending May 31, 1880, as follows:

	Feet, Board Measurement.
Sawed lumber	125,390,000
Shingles and stakes	26,380,000
Split railroad ties	23,265,000
Posts, &c.	12,900,000
Total	25,825,000,000.

HOW TO POSTPONE THE FAMINE.

The *Lumberman Gazette* of Bay City, Mich., says:—If there is absolute danger of a timber famine at any time in the future near enough to render it matter of interest to the people now on earth, it were well that measures were taken to avert it. That may be done in at least three ways. By the planting of forest trees and the care of forests, by the invention and use of substitutes for lumber, and by greater economy in the use of lumber and timber. Regarding the latter it may be said that there is wide field for the exercise of economy. The use of lumber by the Americans is wasteful in the extreme, and there is danger that the waste will continue as long as they are obtainable at the comparatively low prices now prevailing. Because wood is cheap, it is wasted in almost every use made of it. The smoke of its consumption for various purposes ascends by day and by night; in the city and in the country, from stoves, furnaces, bonfires, brush and log heaps. It is consumed in a great number of ways that might be abandoned. It is put into buildings where other material might be more economically used if the element of time were given its proper weight. It is put into bridges where iron would serve a better purpose and in the end prove cheaper. It is used in vessels, but may in time be supplanted by metal. A tremendous quantity is used for fences, which might be dispensed with to a great extent or built of earth or wire; and a vast amount is worn out by the hurrying feet of men and horses in sidewalks and pavements. That wooden pavements and sidewalks are extravagant compared with stone and gravel is no doubt true, although the lower first cost of wood leads to its very extensive use. It is also pleasauter to walk and drive on wood, and these considerations will no doubt prevail until timber reaches a price which will make it more immediately expensive than some other material. The waste of lumber in sidewalks, however, is enormous, even admitting the necessity and propriety of its use for that purpose. There are miles of sidewalk in this city, laid with plank, five and six feet wide when for all practical purposes they could as well be three and four feet wide. An immense saving might thus be effected not only of timber but of money. And if the plank were bordered with grass the appearance of the streets would be improved rather than injured, When the predicted timber famine shall begin to make itself felt there will be room for great savings in sidewalks, and perhaps somebody will invent a style of walk which can be more cheaply constructed of some other material. Then, perhaps sidewalks will not be so ruthlessly condemned as worn out as is the case now, and instead of common councils ordering new walks laid there will be more repairing of walks allowed and the great amount of half worn plank which now goes into bonfires or summer wood will be utilized until it is no longer available. Under the present extravagant use of the gifts of the forest, because timber is comparatively cheap, a dozen broken plank in a hundred feet of sidewalk will provoke the powers that be to order a new one built, and the half and quarter worn planks must be thrown aside to become the prey of the flames. This city is no exception. The same process of waste goes on all over the land, accelerating the approach of the lumber famine which is declared to be nearing. The abundance of the gifts of the forests lead to their wasteful use. An incredible amount of available lumber is cast of as valueless, because it has been once used, and the cost of saving and utilizing it would be too great. As timber advance in price as compared with labor, economy in its use in countless ways will increase, substitutes will be found, and the result may be that the supply will be so husbanded that, with the growth of timber under the impulse of forest cultivation the famine may be indefinitely postponed.

BOARD OF TRADE RETURNS.

In an article on the Board of Trade Returns for August, the *Timber Trades Journal* says: How the timber trade figures in these returns has now to be taken account of—a trade that has nothing to offer in exchange for its imports but hard coin of the realm. The cotton-mill owner who imports the raw material finds a market for the manufactured article in the very land where he laid out his money in the first instance, and thence derives a profit, but the foreign shipper looks to the timber merchants for money only, because, from the nature of the business, all it can be converted into is outside the requirement of the country from which the raw material comes, and of the eleven or twelve millions sterling drawn every year against it not a shilling need necessarily be spent in the United Kingdom. Thus a large increase in the importation of timber represents a decrease in our circulating medium to that extent, and we rather regret to see that the supply which came forward in August, on a not very animated market, was one of the largest for that month that we have on record. Only on two occasions has it been previously exceeded. In 1876 the August return was 1,059,520 loads, and in the following year 1,147,829. Nor has a million of loads since been reached in that or any other month (though six years have intervened) until the present season. Neither can we consider it less than a formidable irruption for the trade to bear up against, at a time when it is holding its own with some difficulty, as to the obtaining of a fair return for its outlay. Not that there is really any harm done yet; the short supply of the spring months, in comparison of last year, is not, even now, wholly effaced. We have still over 10,000 loads to the good; but when a single month has rolled in upon us within a small fraction of 175,000 loads more than it did last summer, some apprehension may reasonably be felt lest September should follow on the same lines and the 10,000 loads be so overwhelmed as to be hardly discernable with a powerful eye glass in the heap of excess next month.

There appears to be an unfortunate habit of reserve and reticence among the importers in the chief centres of trade, who seem to think their business is best conducted by letting their neighbors know as little as possible what their respective engagements are, and thus it happens that if the demand mends for any particular size or quality of wood in an outport, orders go forward for perhaps half a dozen cargoes of it from so many different firms, each ignorant of what the other is doing, and the result is that what

was in good demand a month ago may next month be an almost unsaleable drug on the market.

But the same men who are shy of inter-com munication with other members of the trade in their own locality are often frank and outspoken with those they meet away from home, and who are not concerned with the affairs of their neighberhood except remotely, and not at all in opposition. Then they give and take information freely, and not unfrequently obtain knowledge of what is going on in the very place they came from, which they find most valuable to them in its after application.

Is it not, therefore, very desirable that the trade should have some place of meeting, where everybody from the remotest confines of the empire can foregather to transact business and obtain from one or another all the information it concerns him in his affairs to known? But this brings us round to the subject of the importance of a Timber Exchange in London of a cosmopolitan character; but as that is we understand a subject on which we shall have occasion to write at full length in an early number, we must withhold our pen here. We are concerned for the moment only with the Board of Trade returns, and must not forget the Latin precept, "*Ne sutor ultra crepidam.*"

RAINY RIVER.

A Winnipeg *Times* representative had on Sept. 25th a conversation with Mr. T. Sheppard, manager of the Rainy Lake Lumber Co., at Fort Francis. Regarding the present supply of lumber Mr. Sheppard said:

"We have about 160,000 saw logs and 60,000 shingle logs at present rafted, this would represent if cut about 18,000,000 feet of lumber. On account of the destruction of our mill at Rat Portage by fire, we shall probably cut little if any timber during the coming season."

"What are the varieties of timber in the limits of your company?"

"The logs we have cut are all red and white pine of good quality. Hardwood, such as birch and maple, is scarce and of poor quality. White oak is the principal hardwood."

"What are the agricultural facilities of the Rainy River country?"

"It is, I think, about the finest district for farming purposes in the Dominion. The land is easily cleared, and is a very rich sandy loam with clay subsoil. A good many settlers have gone in this season, and a large quantity of grain—estimated at about 10,000 bushels, principally oats—has been raised. The Rainy Lake Lumber Co. are taking in a threshing machine this fall. The lumbermen will consume all the products of the soil for many years to come, a good market being thus provided for the settlers at their own doors."

"Is Fort Francis progressing?"

"The town now consists of about fifty houses. It is mainly supported by the Rainy Lake Lumber Co. and Hudson's Bay Co., both of which have large establishments there. We have a regular steamer once a week from Rat Portage now, and it is intended to put another on the route so great has been the traffic. The run is made in 24 hours, the distance being about 135 miles."

Mr. Sheppard left for his backwood home.

A LESSON FROM FIJI.

The following letter appears in the Toronto *Mail*.—Mr. Phipps drew his instructive examples from many quarters far apart, but I don't remember that he went as far as Fiji, and yet there too, where civilization has given us the last illustration of its blessings and its curses, he might learn. In the May *Contemporary*, Sir A. Gordon's article on "Native Councils in Fiji' contains the following.—"On one occasion a speaker, commenting upon the destruction of forests and the neglect in some places of the cocoanut plantation, ended by saying:—'The question is, who is to blame?' Roko Tui Bua at once rose, and with great dignity replied:—'We the Rokos, are to blame; the Bulis are to blame; the magistrates are to blame. We Rokos to often give an order and think no more of it. The Buli hears our order, and perhaps repeats it, but does not enforce it. The magistrate says, 'I cannot see that the law speaks of this.' Do you think they will send us yams and bananas and sugar canes from England? Is the government to plant our trees for us? If we are men, we have to live; we have hands; our fathers planted, and we too must plant, and our children after us. In many parts where there was formerly much water there is none to-day. *It is because the timber is cut down the land is bare the water dry.* I hear some say 'who ever heard of planting forest trees?' I heard of it; I have seen it done. I know of trees that have been preserved for years. Many will say, 'what folly! Do these trees bear fruit?' Well, what about your house? Is that built of fruit or wood?'" Bravo! So Canadians may learn from Fijians.

Yours, &c.,
JOHN CARRY.

Port Perry, Sept. 24, 1883.

A FAMOUS SHIP.

The London *Timber Trades Journal* says:—We have more than once made mention of the famous old New Brunswick built ship, Marco Polo, formerly well-known in the Australian passenger trade, and celebrated for her quick passages, having once made the voyage out and home within five months under canvas alone. Latterly, and for some years past, she had subsided into the timber trade, which has always been the *refugium peccatorum* of ocean-going ships, as they lose their character at Lloyd's, and are no longer considered trustworthy for general or perishable cargoes. After many vicissitudes and revivals the old ship met her fate at last on the coast of Prince Edward Island, in the Gulf of St. Lawrence, and the wreck and cargo were sold last week for the insignigcant sum of £600. Her cargo alone would be equal, if all there, to above 2,000 loads, as she was originally over 1,500 tons register. From the small price obtained, probably little but her sails and rigging with her ground tackle are expected to be landed, with probably some of the cargo, the cost of saving which may be nearly as much in a sea way as it is worth. All that can be saved from the wreck, if sound and good, will, doubtless, ere long be afloat again in some new colonial ship. The biography of the Marco Polo, if it could be fairly written, would be almost as interesting as that of the great traveller after whom she was named.

A NEW DEPARTURE.

Something novel among Maritime province ship-builders is announced in the St. John papers. Mr. McKie, a well-known Boston shipbuilder, has had constructed for him in St. John under his own superintendence for the most part, the frame of a 600 ton three-masted schooner. This material, when in shape, will be freighted to one of the yards in the vicinity of Boston, where it will be put together and the vessel completed. "The scheme is novel, and the more it is considered the more apparent its advantages become," the *Telegraph* goes so far as to say. What with rafting timber to American seaports and freighting vessel-timbers, New Brunswickers and Americans are becoming quite too previous.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

READER, if you suffer from any disorder of the Liver, Stomach, Bowels, Kidneys, Skin or Blood, try Burdock Blood Bitters, Nature's specific medicine for acting on those organs for the outlet of disease. 25,000 bottles sold in the last three months.

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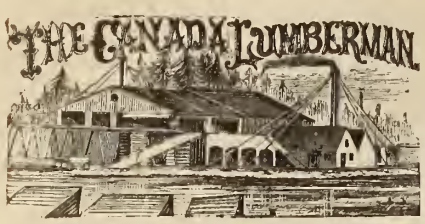

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

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The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., OCT. 15, 1883.

ATTENTION!

In view of a proposed change in the business relations of the proprietors of this Journal it has become necessary that they should insist upon an early settlement of all overdue subscriptions and accounts. As the present proprietors have been exceptionally lenient with their patrons in money matters, they trust their present appeal for a prompt settlement of their little bills will not be made in vain to any of them. Individually, it is true, these bills are not large, but when taken collectively they amount to a sum which renders it of importance that they should be converted into bankable funds without delay, even had not such a course been rendered absolutely necessary for the reason already stated.

THE manufacture of barrels, kegs, and all descriptions of wooden ware is about to be commenced at Montreal with a capital of $100,000.

THE Pope lumber mill, of L'Assomption, Que., an exchange bank asset, is under negotiation at a price said to be over $80,000. It cost them $75,000.

EDDY of Hull, claims to have the largest saw mill and the largest match factory in the world. The mills of Messrs. Perley & Pattie and J. R. Booth of the same city, each turn out 2,000,000 feet per week.

PROMINENT lumber merchants in Bangor, Me., are negotiating for the erection of a large steam mill on the shores of Silver lake, in that state. Into this lake the logs of 100,000 acres of heavily timbered land can be driven, and the sawed product can be loaded from the mill into cars for shipment to Bangor.

A KINDLING-WOOD company, called the Eureka Manufacturing Company, is being formed at Muskegon, Mich., with a capital of $10,000. The object is to build a factory near the mill of the Beidler Manufacturing Company to replace the one burned at North Muskegon.

OWING to the moderate views of log operators this season, it is predicted at Saginaw that the horse market this winter will be quiet in Michigan. Lumbermen have stock enough on hand to begin operations, and light operations from Canada, Ohio and Illinois will likely be the rule.

CALDWELL, the well-known lumberman and mill owner of Carleton Place, has 800,000 logs lying on the Upper Mississippi river and its tributaries. He cannot get them down on account of the decision in the McLaren-Caldwell case and his mill is at present idle for want of stuff to cut.

FIRST-CLASS wood-working machinery is being rapidly introduced into many sections of the southern states. Factories are springing up on every hand. On account of their superb timber growths, Kentucky, Tennessee, North Carolina, Louisiana and Arkansas, are the most favored localites at present. Saw mills, shingle mills, barrel and stave factories are busy and the number is rapidly increasing.

AT a meeting of the shareholders of the New Brunswick Land and Lumber Company (limited) held in Fredericton, the following directors were elected:—Lord Elphinstone, Hon. Isaac Burpee, Hon. Donald A. Smith, Sir John McNeill, George Stephen, Samuel Thorne, E. R. Burpee, K. Tod and O. H. Northcote. At a subsequent meeting of the directors Lord Elphinstone was elected President, and W. J. Whitehead, Secretary-Treasurer.

THE statement that shantymen were being offered $30 a month and board to go to the Michigan lumber regions is incorrect. Eighty-four men have left for Mackinaw to work for an American lumber company. They were hired for $16 per month and board. Another gang has been hired by the Diamond Match Company at wages averaging from $18 to $20 per month. The lumber business on the Ottawa and tributary rivers is being restricted owing to the slack market.

T. W. HASTINGS, of Mosher & Fisher, Bay City, Mich., says that his firm will curtail the log crop the coming winter at least one-half, and will put in but 20,000 feet and no Norway. Whitney & Remick will curtail one-half of their intended in-put. Judd, Clark & Co do not propose to cut a stick, and a number of large concerns propose to take in all the sail they usually carry. At the close of the season it is estimated there will be 300,000,000 feet of logs in the Tittabawassee booms.

THE Albany *Argus* says :—There has been a good attendance of buyers in Albany, who have purchased freely, although no exceptionally large sales have been reported. The transactions have been in all kinds of pine, which are firmly held, and the tendency of the market is toward an advance, which is rendered necessary by the high rates of lake and canal transportation. In Michigan and Canada the transactions have been only fair, Good and high runs are scarce and in active demand. There is a scarcity of vessels on the lakes and boats on the canal. Many of the latter have been freighting from here to New York and vicinity, but have now gone west again, and expect to make two more trips to Albany this season. Spruce and hemlock continue scarce. Recent rains have not been enough to furnish sufficient water in Northern New York to keep the mills in motion, but enough has been manufactured to keep a fair supply in the market, without any accumulation on the yards. Lath are coming in steadily, and are taken as soon as received. The stock of hardwoods is only fair, but continuous receipts keep an assortment in the yards, for which there is a steady demand. Shingles are in sufficient stock for the requirements of the market.

THE Lumber Manufacturers' Association of the Northwest have decided that log cutting should be curtailed, because the forests cannot stand the drain and the present production largely overstocks the market.

THE Hull correspondent of the *Timber Trades Journal* says :—This season has seen quite a revival in Quebec pine, some of the local firms have operated in it with satisfaction, although they have not touched it for some years.

A DISASTROUS fire occurred at Woodstock, Ont., on the forenoon of Sept 18th, completely destroying Pocock's planing mills on York street, together with a large quantity of lumber; the loss is about $10,000. Cain's printing office caught fire in several places.

THE Belleville *Intelligencer* of Oct. 9, says :—Five drams of timber, containing 160,000 feet, were forwarded from here on Satuday last, to Quebec, in tow of the *Bonar*. Four drams, containing 125,000 ft. will be sent from here on Saturday, to the same destination.

THE Belleville *Intelligencer* says that Messrs. Gilmour & Co. intend to cut 150,000 pieces on their timber limits this winter, 70,000 of which will be floated down the Moira. They now have about 100,000 pieces in the different streams of Hastings and Peterborough counties.

THE long pending suit brought by Messrs. George and Andrew Holland, to recover possession of certain timber and mineral lands in Portland township, Ottawa County, decided at Aylmer in favor of the plaintiffs. Some years ago the Quebec Government cancelled the title of Messrs. Holland and resold the land to Ross Bros., who are now compelled to pay costs and render an account of all timber taken from the land by them. The decision is an important one, as numbers of titles to land were cancelled at the same time as the one in question.

THE DESTRUCTION OF THE HEMLOCK.

The following lettor appears in the Montreal *Witness* :—

SIR,—I cut the following extract out of one of your late issues : "Canadian hemlock bark is to be admitted free of duty into the United States. We have cleared most of our forests pretty well of hemlock and in a few years more the freedom of so large a market will make tanning a lost art in Canada for lack of bark. Can nothing be done to protect it and to secure a continuance of so important a natural industry ?"

A remedy was once proposed by the Conservative Government, about 1872 or 1873, if I remember right, viz., an export duty on hemlock bark. The leading tanners had petitioned for an export duty on the ground that their important industry was threatened with destruction by the wholesale exportation of hemlock bark, and the Government introduced a motion to that effect, but allowed it to drop on account of the opposition of a few members in whose constituencies hemlock was still plentiful and whose constituents found it their interest to export the bark to the states. I remember the incident well, having supported the Government on that question. You remember that, in those days, protection was at a discount; no public man, Liberal or Conservative, dared to call himself a protectionist, and it was alleged that such an export duty would be rank protection. Now, under the National Policy, I suppose the Government will not be ashamed to protect our leather industry, even if, in order to do so, they must have recourse to protection. Absolute protection appears to me as contrary to common sense as absolute free trade, especially for a country like ours. Would it not be better to study our wants, apply either the one or the other of those systems to each separate case, as it will be found more advantageous. Such ought to be the aim of a true National Policy. In the case of hemlock bark, the United States appear to have found it so, when they deviate from their policy of protection to admit hemlock bark free of duty. Hemlock timber will, before long, become valuable, as pine and spruce are getting scarcer. It is well known that, in a great majority of cases, hemlock is now felled merely for the sake of the bark and the timber allowed to rot on the ground. Everything that encourages the export of hemlock bark tends to encourage that great waste.

H. G. JOLY.

Pointe Platon, Sept. 29, 1883.

ALGERIAN FORESTS.

The forests comprised in the colonized parts of Algeria include at the present time 14,000,000 of trees—viz., 6,019,011 large forest trees and 8,373,569 mulberries, resinous, and ornamental trees. According to the official returns there are 278.325 hectares covered with cork oak, 605,622 with evergreen oak, 42,742 with cedar, while the remainder of the forest area is occupied by the tree known as oak-zeen, Aleppo pine, chuya, wild olive, encalyptus, pistachio, locust bean, broom, etc. The majority of the cork trees are in the province of Constantine, fringing the coast of La Calle and Bougie. Here also grows the oak-zeen, peculiar to Algeria, which resembles the white oak, but has a leaf like a chestnut. Some of these trees, and especially in the forest of Skira on the Tunis frontier, grow to a colossal size and are excellent for shipbuilding purposes. The chestnut flourishes in the forest of Edough, near Bona, while the plains in the neighborhood of the coast contain elm and ash, and the river valleys willow, elder and poplar. The lower chains of the Atlas range are covered with evergreen oak, mingled with broom and sweet acorn oaks. On the ranges above are the thuya, Aleppo pine and maple, though these latter are limited in their localities, such as the Aures hills and the environs of Bathna, where the summits of the mountains are thickly planted with cedar. Toward the coast of the province of Algeria are the forests of Sahel and Mazafran, near Koleah, the latter possessing huge ash trees interlaced with the wild vine ; but the true forest country does not commence until we reach the Atlas mountains, where at the forests of Ak-Fordoun with very large oak-zeens, the forest of Beni-Menasser, consisting principally of wild olive the forest of Ourensenis, of thuya and Aleppo pine, and the venerable forest of Tenlet-el-Haad where the cedars are from five feet to eighteen feet in circumference and from forty-five feet to 100 feet in height.

BRITISH COLUMBIA TIMBER.

Mr. Alexander, of the National Investment Company, who recently returned to Toronto from a trip to the Pacific coast, gave some interesting notes of his experience to a reporter :

"The Douglas fir, sometimes called Oregon pine, is the principal timber exported. At the spikedriving on the C. P. R., the Governor of Washington Territory said that all the Oregon pine came from Washington Territory. He should have added British Columbia. The demand for that timber is increasing from year to year. There are dense forests of it around the Sound, and on the shores of British Columbia, but the most of the accessible limits have been secured. At Burrard's Inlet ten large vessels were loading, one mill running night and day. The destination of these cargoes were, London, San Francisco, Melbourne, Port Philip, China, and South American ports. The timber for San Francisco and Australia consisted largely of flooring, planed, tongued and grooved. The forests are not so liable to be burned by bush fires as in the east, except where they have been logging camps, the rainfall during the winter months being sufficient to keep the mosses and ferns damp, the sun's rays being excluded by the density of the forest."

THE UPPER ST. JOHN.

The Fredericton *Capital* says : On the Upper St. John, Hon. Mr. Randolph will cut about 10,000,000 feet, a reduction of about 30 per cent. on last year's yield, which he is understood to have sold at very good figures. Robert Connors, Wm. H. Murray's main man, who usually operates to the extent of from 15,000,000 to 20,000,000 feet, and who last season only cut 8,000,000, states that he will not realize more than half that amount this year. Last winter between 35,000,000 and 40,000,000 feet of spruce were harvested on the Upper St. John

and 65,000,000 on the Aroostook. Mr. Connors states that not more than 50 per cent. of these figures will be realized the coming season. Mr. William Richards believes that not more than 50,000,000 feet of logs will be harvested on the South West Miramichi this season, which is about 60 per cent. of an average yield. It is reported on good authority that Mr. Gibson will not operate to more than two thirds of his operations of last year, or about 16,000,000 feet. Hon Thos. F. Gillespie says that 40,000,000 feet of deals are awaiting shipment on the North Shore, and that operations will probably be light this season,

A Lumbermans' Library.

The *Lumberman's Gazette* of Bay City, Michigan, says :—Although most Michigan lumbermen are very considerate of the physical wants of their employees in the woods duriug the winter, they have heretofore paid very little attention to their mental culture, and any reading matter in the woods had to be secured by the workmen themselves. Stewart Ives, of Big Rapids, however, proposes to inaugurate a new era in this direction which is very creditable to his head and heart. He has made arrangements to furnish a number of the leading periodicals for his camp, and besides has furnished about 125 volumes of standard books as a library for the use of his men. This is a commendable act, and one which we hope to see very extensively imitated by other employers. We believe it will be productive of excellent results, in the improved morale of the men composing his working force. It is a subject at least worthy the consideration of every person employing a large force in the woods.

Tree Planting.

A despatch from St. John, N. B., as to the Dominion and Provincial Exhibition there, says :—"The fourth day of the exhibition witnessed a very large attendance. The judges in all the departments are making awards. The Historical Society, in honor of the centennial year, planted a large number of trees on Queen's Square to-day. The work was done by the eading citizens. The Lieutenant-Governor planted a tree in honor of the Queen, and Mr. Cushing one to the Prince Consort, Bishop Sweeney another to the Prince of Wales, the coadjutor Bishop to the Princess of Wales, Chief Justice Allen to Prince Victor, Sir Leonard Tilley to Prince George, Senator Boyd to the Princess Louise, and Mayor Holly, of Portland, to the Marquis of Lorne. The descendants of the loyalists planted trees in memory of their forefathers.

A Good Day's Work.

The William Hamilton Company of Peterborough have just been informed that the mill recently erected by the Georgian Bay Lumber Company at Waubashene, and for which they supplied the whole of the machinery has proved itself to have a capacity of 375,000 per day of twelve hours, which every mill man will admit is an exceedingly good record for mill containing but 1 large circular with steam feed ; 1 of Hamilton's Patent twin circulars with steam feed ; 1 Poney gang, with seven inch crank ; 1 Slabbin gang and 1 Stock gang. This record we may say is beyond the most sanguine expectations of either Mr. Hamilton or the proprietors of the mill, and is the best possible evidence of the skill and ease with which the Wm. Hamilton Company of Peterborough turn out their work.

Death of Mr. James Little.

MONTREAL, Oct. 6.—Mr. James Little died at his residence, Cote, St. Antoine, on Tuesday, October 2, in his 80th year, Mr. Little was long a resident in the Niagara District, Ont., and moved to Montreal about twelve years ago, to be in the vicinity of timber limits, where he carried on extensive lumbering operations until within the last few years. Mr. Little was the first person to make a really vigorous effort to arouse public opinion on the subject of the destruction of our forests, and contributed many articles on the subject to the press. His son has followed in his father's footsteps in regard to forestry. Mr. Little had a large circle of acquaintances in Ontario, where he was even better known than in Montreal.

TIMBER STEALING.

Timber stealing of all kinds, from that practiced by the impecunious householder who helps himself to fuel from his neighbor's fence or wood-pile to that practiced by men who count their operations by the million feet, has unfortunately been too common to excite much comment, but it is not often that the theft is attempted on so large a scale as is involved in a California scheme. The timber in question is located on Government lands in northern California and includes the most valuable redwood timber on the coast. The *modus operandi* consists in obtaining possession of the lands by means of applications signed by dummies. Several hundred of these applications have been filed with the government authorities, but it seems that some one has "smelt a mouse" and the grand jury is to investigate. If the scheme were successful, the promoters of it would get fraudulent possession of several million dollars worth of redwood—one sixth of the total lumber supply of the state. It is to be devoutly hoped that they may be frustrated in their clever project.—*Lumber World.*

Timber for Dakota.

The Northern Pacific Railroad managers are trying to ascertain the kind of timber that will best grow in Dakota and Montana, along the line of the road. Much of the timber planted in northern Dakota under the timber claim law has proved a failure, because the trees were not adapted to the dry soil and climate. The Northern Pacific men in interest think that the country can abound in trees if the right kinds are planted.—*Northwestern Lumberman.*

Lumber for Railways.

The New York correspondent of the *Northwestern Lumberman* says :—Some of the journals make a big hue and cry about the decline of railway interests, but the consumption is really enormous with them. Car stuff, ties, timber and lumber is used in large quantities. Conversing with Mr. Hageo, the purchasing agent of the Delaware, Lackawana & Western Railroad Company, I was informed that between 1,000,000 and 2,000,000 feet of lumber and timber was at the present time being used in construction and improvements in Buffalo, N. Y., while 250 carloads per month were being used in and about the coal mines worked by the company. And it is a positive fact that the lines centering at this place are doing more business than ever before in every variety of transportation.

THE *Lumberman's Gazette* says :—Reports reach us that the shingle cut at Manistee was very materially reduced during the month of September, by several mills shutting down completely, and others restricting the daily amount of the output. The action of the shingle manufacturers at Manistee, not only during the past month, but on other occasions, demonstrates that they grasp the situation, and resort to practical methods to forward their own interests by affecting the market. If lumber manufacturers would resort to similar practical methods, they would experience less trouble about the market and prices.

THE *Lumberman's Gazette* Oct. 10, says :—The loggers' delight, "the beautiful" snow has fallen to the depth of an inch or two at several points in northern Michigan, and the busy notes of preparation in many directions in the woods, where solitude has for several months reigned supreme, and the sound of the axe and crash of the timber being felled for camp-building and other purposes would almost incline one to the opinion that "the woods are full of" the red sash brigade, and the "slaughter of the giants" had already commenced.

WATER POWER
TO LEASE.

THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.

R. & G. STRICKLAND
1d86 LAKEFIELD, ONT. w15L9

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STEWART & FLECK, Jr.,
Manufacturers of every Description of
Saw and Grist Mill Machinery,
Water Wheels, Steam Engines, Derricks, Boilers, Steam Pumps, Mining Machinery
20L REPAIRS PROMPTLY EXECUTED. 1y
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WM. AHEARN
MANUFACTURER OF
HAND SPIKES CANT DOGS
Lumberman's Tools, etc.,
HIGHEST AWARDS IN CANADA and U.S.
L20-1y CHAUDIERE, OTTAWA.

FOR SALE.
SPALT MACHINE
For saving Lumber refuse, second hand, but all complete and in good order, taken out to replace one of greater capacity.
Address,—
THE RATHBUN COMPANY,
6L19 DESERONTO, Ont

SAW MILL MACHINERY
FOR SALE.
STEEL AND IRON
Slabbing and Stock Gang Gates
WITH OSCILLATING MOTION, ALSO,—
IRON PITMANS, FLY WHEELS,
Driving Pulleys, and other Saw Mill Machinery,
In Good Order, which has been taken out of Mills that have been closed. Address,
The RATHBUN COMPANY,
8L20 DESERONTO.

SHINGLE MILL MACHINERY.
Parties requiring New Machinery for Shingle Mills, will do well to communicate with us before purchasing.
THE RATHBUN COMPANY,
6L19 DESERONTO, Ont.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine.

FOR SALE.
A LATH TRIMMER,
NEW, and in good order, will be sold Cheap. Address,
THE RATHBUN COMPANY,
6L19 Deseronto, Ont

MAPLE TIMBER.
Parties having quantities of first-class HARD MAPLE that they can cut to sizes as furnished, please communicate with us.
W. H. BROWN & Co.,
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Shingles, Doors, Sash, Flooring, &c.,
WANTED,
STATE QUANTITIES AND PRICE TO
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SAW MILLS
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TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.
Eighty-Five Square Miles (54,400 Acres) of Limits. Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.
Canada Pacific Railway now running through part of the property.
For full particulars address :—
WILLIAMS & MURRAY,
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ST. LAWRENCE CANALS.

Notice to Contractors.

SEALED TENDERS, addressed to the undersigned, and endorsed "Tender for St. Lawrence Canals," will be received at this office until the arrival of the eastern and western mails on TUESDAY, the 13th day of November next, for the construction of a lock and regulating weir and the deepeniog and enlargemeot of the upper entrance of the Cornwall Canal.

Also for the construction of a lock, together with the enlargement and deepening of the upper entrance of the Rapide Plat Canal, or middle division of the Williamsburg Canals.

Tenders will also be received until TUESDAY, the 27th day of November next, for the extension of the pierwork and deepening, &c., of the chaonel at the upper entrance of the Galops Canal.

A map of the head or upper entrance of the Cornwall Canal and the upper entrance of the Rapide Plat Canal, together with plans and specifications of the respective works, can be seen at this office, and at the Resident Engineer's office, Dickenson's Landing, on and after Tuesday, the 30th day of October next, where printed forms of tender can be obtained.

A map, plans and specification of the works to be done at the head of the Galops Canal can be seen at this office and at the lock keeper's house, near the place, on and after TUESDAY, the 13th day of November, where printed forms of tender can be obtained.

Contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms, and—in the case of firms—except there are attached the actual signatures, the nature of the occupation and residence of each member of the same ; and further, an accepted Bank cheque for the sum of *Two Thousand Dollars* must accompany the Tender, which sum shall be forfeited if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted.

The cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,
A. P. BRADLEY,
Secretary.

Dept. of Railways and Canals,
Ottawa, 28th Sept., 1883
d73-1aw

THE FORESTS AND THEIR MANAGEMENT.

We take the following from Mr. R. W. Phipps' report to the Ontario Government:

INDIA.

The necessity of preserving tropical forests has fortunately attracted the attention of Government in British India, where the importance of maintaining an equilibrium of temperature and humidity is of much immediate consequence to the social welfare; and the growing demands of railroad use, and the various applications of the arts, render it a subject of direct practical utility.

The matter has been agitated since 1850, and and in 1864, Government laid the foundation of an improved general system of forest administration, for the whole Indian empire, having for its object the conservation of state forests, and the development of this source of national wealth. The experience acquired in the forest schools of France and Germany has been brought to apply in this great national undertaking. Among the more important general principles laid down for the execution of this measure is that all superior Government forests are reserved and made inalienable, and their boundaries marked out to distinguish them from waste lands available for the public. The Act of 1864, defining the nature of forest rules and ponalties, has been adopted by most of the local governments, and the executive arrangements are left to the local administrations. Various surveys have been mado to obtain accurate data concern ing the geographical and botanical characteristics of the reserved tracts, and the kind of timber best adapted for various localities has been carefully ascertained.

In 1866, the Government resolved upon sending out five young men, duly qualified by education in the forest schools of France and Germany, for the forest department of India. An arrangement was made the same year by which forest officers in the India service, who might choose to come to Europe on furlough, would be able to increase their professional knowledge by studying forest management and other subjects connected with forests in Great Britain and on the continent. A number of officers have availed themselves of these arrangements, and some of their reports have been published.

Of these, that of Captain Walker, and that of M. Gustav Mann, I have largely used elsewhere, as the reader will have observed.

"At tho moment of our writing," says the author of a report from which I have obtained much, presented to the United States Congress in 1874, "the public journals are giving most painfnl accounts of the distress in India from famine. From a careful study of this subject we cannot doubt that this calamity is due to the fact that the forests have, of late years, been swept off by demand for railroad and other uses much more rapidly than formerly, and that the exposure to winds and sun thus occasioned may have largely contributed to these painful results. The remedies are to be sought in the restoration of that due proportion of forest shade upon which agriculture depends for success. If the officers to whom the opportunities for European observation fall, improve them as well as some reported by Captain Walker, we may reasonable hope for a radical though not on immediate restoration of abundant harvests throughout the vast countries of India."

Now, since this was written, we have Sir Richard Temple's valuable book, "India in 1880," which I have noticed before. This gives us some idea of what has been commenced by the gentlemen who have been writing the reports we have used. He says:

"The Government of India has enacted a law regulating all matters connected with forest conservancy, and the provisions of this law are being carried into effect by the several local governments. The forests are divided into two categories; first, those which are 'reserved,' being preserved and worked through state agency, in a most complete manner; secondly, those which are 'protected,' being preserved less thoroughly. The best timber markets are mainly supplied from the reserved forests. Care has been taken to determine what tracts shall be 'reserved' and 'protected,' and to mark off their boundaries. The area thus defined in the several provinces already, or likely to be defined ere long, will prove to be hardly less than eighty thousand square miles for the whole empire. The primary object of the administration is to preserve the forests for the sake of the country. Due attention is also given to the financial outturn; much income is already secured. The expenditure is over five hundred thousand pounds annually, but the receipts amount to nearly seven hundred thousand, and in time the forest department will have a prosperous revenue.

"The superior officers of the department are for the most part British, trained in the forest schools of France and Germany. The Inspector General of Forests with the Government of India is Dr. D. Brandis, whose services to the empire have been conspicuous in organizing a system of forestry which is sound and scientific, and is yet adapted to the circumstances of the country. Instructions in forestry is afforded to natives also; forest schools are established for them, and in time they will take a large share of the administrative work.

"As might be expected, the system of forest conservancy, though generally accepted by the natives who dwell near the 'reserved' and 'protected' tracts, is sometimes opposed by them. There must always be some danger lest the foresters should, in their zeal for conservancy, infringe upon the prescriptive rights of the inhabitants. The local civil authorities are vigilant and prompt in asserting and vindicating the rights of the people in this respect; for the recognition of which rights, indeed, ample provision is made by the law. They should, however, be caroful to support the forest officers in the execution of duties which are of the utmost consequence to the welfare of the country. Many of tho hill tribes habitually burn patches of valuable forost, in order that the ashes may so fertilize the virgin soil as to rendor it capable of producing a crop without tillage. Having reaped one harvest, they leave tho spot marked by charred stumps of timbor trees, and move on to repeat the same ravage elsewhere. This barbarous and watefully destructive practice is gradually and cautiously checked, by reclaiming these people from agricultural savagery, and inducing them to plough lands, and raise yearly crops by ordinary husbandry.

"According to the latest returns there appear to bo 29,600 squaro miles of demarcated reserve forests, 3,500 square miles of protected areas, and 35,000 square milos of unreserved forests, or 68,000 square milos in all. This appears a comparatively small arca for so large an empire, especially when it is rememberod that of this not more than one half is effectually preserved. Some extensive forest tracts exist, however, in the Madras Presidency, of which a return remains to be rendered. There are, further, 31,000 acres of plantations in various districts."

These plantations, I may remark, are those commenced by the foresters under Dr. Brandis, and are being every year added to at the rato of some thousands of acros. It may be noticed that the forest officers trainod in Europe for India, and at work there now, number forty-six out of a staff of ninety-three, who have, of course, an immense uumber of subordinates.

Concerning other countries, it may be generally remarked, that all the nations of continental Europe are moving in forestry matters, and that there are many schools besides those I have mentioned.

SOUTH AUSTRALIA.

The colonies of Australia and New Zealand are working earnstly in the matter of tree culture. In South Australia there is, we are told, far too little woodland. The consequences are that so arid is the country in parts that the reports state that they can never expect to grow wheat unless the rainfall can be, by the assistance of plantations or otherwise, increased.

South Australia has moved vigorously in the matter. They have appointed a conservator of forests, Mr. J. E. Brown, F. L. S., who has written a valuable work on tree culture there. Reserves have been mapped out, of which one is about fifty thousand acres, another nine thousand, another twenty thousand, with smaller ones of six or seven hundred—the larger evidently intended to be improved into forests on the European plan—the smaller as nurseries and seed-bed for young plants. Houses have been built for nurserymen, and all suitable buildings erected, and forest rangers and police appointed. The forest board had been in existence three years in 1879, and from the report of operations sent in by Mr. Brown in that year, giving full and admirably worded details concerning the soil, trees, aud method of procedure adopted and to be adopted on all the reserves, there is little doubt that South Australia will, considering how rapid growth, when encouraged, is there, (twice as rapid as in Britain) soon possess large and valuable forests, fit to yield yearly a regular and large quantity of timber, without either clearing or injuring the woodland reserves.

NEW ZEALAND.

To show the destruction of timber even where unnecessary for clearing it may be observed that it is evident New Zealand possessed, when first colonized to any extent, in 1830, much land in a prairie or unwooded state, as her area was sixty-six million acres, and her wooded area twenty million acres. However, by 1868 she had destroyed five million acres of woods; and by 1873, she had lost eight, leaving her but twelve million acres. The destruction was principally caused, not by clearing, but by carelessness in allowing bush fires; and it was evident the land would, at that rate, soon be deforested altogether. The well-known writer, Hochstetter, says:—"Individuals should not be suffered to turn the country into a desert to the detriment of whole generations to come. The woods are ransacked and ravaged, in New Zealand, with fire and sword. During my stay in Auckland, I was able to observe from my windows, during an entire fortnight, dense clouds of smoke whirling up, which proceeded from an enormously destructive conflagration near tho town. When the fire had subsided, where had been a large beautiful tract of forest was now nothing but ashes." An official of the New Zealand Company had also pointed out to him the destructive propensities of the settlers in cutting down valuable wood. He says:—"A melancholy scene of waste and destruction presented itself to me when up to see the forest. Several square miles of it were burning, having been fired in order to make room for the conveyance of logs down the creek. Noble trees, which had required ages for their perfection, were ruthlessly destroyed in great numbers."

In consequence of this state of affairs, public opinion in New Zealand was loudly expressed, and numerous reports were presented to the Legislature causing animated debates, and large and valuable compilations of these were published. By this time, there is every reason to believe, if these reports and plans have been properly attended to and carried out, New Zealand has made good progress in the matter, though we have not, as in South Australia, an actual Forest Literature, such as the conservator has published.

(To be Continued.)

PRESENTATION TO QUEBEC CULLERS.

On Thursday Sept. 20th at the Supervisor of Cullers' Office, Quebec, the following presentations were made by the square timber cullers attached to the office:—

To James Patton, Esq., Supervisor of Cullers, a very handsome ice pitcher and goblet, the former bearing the following inscription:

"JAMES PATTON, Esq.,
SUPERVISOR OF CULLERS,
From Cullers of the Square Department,
as a mark of respect.
Quebec, Sept. 20th, 1883."

To J. J. Walsh, Esq., Acting Deputy Supervisor of Cullers and Cashier, similar articles, with inscription as above.

"To Edmund Gowen, Esq., accountant, a meerschaum pipe, with usual attachments."

The spokesman was Mr. Culler Thomas Gilchen, who complimented the supervisor and his acting deputy for the interest taken in the cullers by them, and more especially the square timber cullers, who on this occasion beg their acceptance of some trifling articles to mark the unanimity and good feeling that at present existed between the cullers and the chiefs of the office. Mr. Gilchen before finishing would beg leave to remark that should the same kindly disposition be shown in the future, and he had no reason to fear otherwise, judging from the past twelve months, the cullers would be more than happy.

Mr. Supervisor Patton, in his own happy manner, thanked the gentlemen present, and begged to assure him that it always gave him pleasure to be on friendly terms with those over whom he had the pleasure to preside. For the future he assured them that with the assistance of his very efficient and obliging Acting Deputy Mr. Walsh, he had no fear that all would go on in the future in the same satisfactory state.

Mr. Walsh, in responding, thanked the gentlemen present for the very handsome present, as also for the kindly manner in which they had alluded to the part taken by him in the working of the office for the past year. It always gave him pleasure to see things work smoothly and and they might rest assured with such a man at helm as our worthy supervisor, the same harmony and good feeling would continue. Mr. Walsh before resuming his seat complimented the cullers on the increase made to their salary in the way of having their expenses paid, and stated that it only required to be pointed out to the Hon. Mr. Costigan and his deputy, Mr. Miall, for these gentlemen to at once see the justice of their claim by ordering the additional amount in question to be allowed the cullers.

Mr. Gowen stated that he would give his answer in writing.—*Quebec Daily Telegram.*

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Sept. 28:—

	1881.	1882.	1883.
Waney White Pine..	2,286,531	2,201,705	2,565,305
White Pine.....	5,049,732	7,161,267	5,338,537
Red Pine.....	1,856,596	1,329,262	336,708
Oak.....	2,530,165	1,052,977	1,428,630
Elm.....	998,678	635,205	302,526
Ash.....	392,877	243,301	223,471
Basswood	3,576	1,273	2,244
Butternut.....	2,991	2,585	1,028
Tamarac.....	24,382	12,445	5,159
Birch & Maple.....	151,742	268,282	138,766
Masts.....	25pcs	33 pcs	—pcs
Spars.....	— pcs	51 pcs	— pcs
Std. Staves.....	368.7.2.29	320.2.3.29	541.1.2.28
W. I. Staves.....	348.1.3.3	1066.0.0.28	453.4.0.26
Brl. Staves.....	.....	71.9.1.9	87.2.0.3

JAMES PATTON,
Quebec, Sept. 28. Supervisor of Cullers.

NATIVE WOODS FOR DECORATIVE PURPOSES

A writer in the *Railroad Gazette* gives some ideas about our native woods and their uses that may be of value to our mechanics. He says that white wood is valuable because it remains where put, notwithstanding the fact that its surface is perhaps as easily affected by water as almost any wood. In Virginia there are tracts formerly known as the "Wild Lands" in which much fine forest remains, tracts where the tulip poplar, or the white wood, shows trees that will square two feet for sixty feet of length, and where the beech, oak, the hickory, and the sugar maple have never been touched. One of the finest tracts of the much used cherry tree is found along the eastern edge of the outcroppings of the coal measures of the northern part of this region. Those who have been accustomed to see miserable, caterpillar-eaten specimens of this tree, would be surprised by the splendid trees found growing in these forests—trees three and four feet over the stump and sixty feet upward before reaching a limb.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

W. A. EDGARS, of Frankville, was cured of Liver and Kidney Complaint after life was dispaired of. He had remained from ten to fifteen days without an action of the bowels. Burdock Blood Bitters cured him, and he writes that he is a better man than he has been for twenty years past.

WOOD PAVING IN NANTES.

At the present moment, writes a correspondent from Nantes, the Rue de Rivoli and Boulevard Montmartre are being paved with wood. This work seems to interest tbe public much, and the proceedings are regarded with the greatest curosity, French people being fond of novelties. We know tbat the new wood pavement system is imported from England after having been used for many years in St. Petersburg, and tbat the society which bas the contract for certain streets and avenues of Paris is a French one, and that it employed Englisb workmen to begin with, but now a few of them only are retained. The wood employed is Norwegian redwood, and not French wood, as mentioned by me in a previous letter. The experiments made in tbe Champs Elysees, Boulevard Poissonniere, and Rue Montmartre, have shown tbe advantages of this system, which are much appreciated by tbe public—maintenance of the chaussee, increased facility for the locomotion, comfort in driving, and tbe considerable diminution of dust and noise, insupportahle to tbose living close to busy thoroughfares. Even tbe Macadam system, which bas the advantage of lessening the noise, is expensive in maintenance, and requires on dry summer days to bc sprinkled with water, as it emits enormous quantities of sand and dust. The former is allowed to flow down tbe drains, causing no little damage. Tbe dust also blows about in the air, dong harm to people's lungs and eyes, and causing great inconvenience to the neigbboring houses. The Paris Board of Works have already decided to lay about 80,000 metres of wood pavement, and it is boped that it will rapidly extend. We in Nantes bave entered minutely into the question of tbe advantages derived from the use of wood pavement, knowing that much would be gained by this system being adopted, although we are likewise aware that not every kind of soil adapts itself to its use, as the down end of the wooden blocks is more subject to putrefaction when in contact witb damp ground. Otber cities may, no doubt, take tbe subjeet into consideration, and thus benefit the timber trade generally.—*Timber Trades Journal.*

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* writing on Sept. 8th, says:—The fall sbipments are again being much inconvenienced by rain in the lower Gulf ports, and it is fortunate for shippers that by means of steamers they can minimize tbe amount of damage that will accrue to damp goods while on passage. Unless wbere extra precautions have been used, I should not be surprised to hear of complaints from our customers at the Cape and Australia, whose goods have been shipped after midsummer. This heavy rainfall has of course facilitated floating operations to the principal export places very much, and has had a not unimportant effect on the present condition of the market. With tbe small number of logs in the streams, of 1882 year's cuttings, the aspect of matters would now have been mucb more favorable to mill owners had even a partial failure occurred with the floating.

REVIEWS.

DIO LEWIS'S MONTHLY for October is the best of its three numbers. Our Rich Men, by Dio Lewis, ought to help many persons wbo fancy that bappiness and money are synonymous. Our Young Women, by Rev. Dr. Howard Crosby is a brave discussion of an enormous but fashionable evil. Idol-Worship in India, by Amrita Lal Roy, will set many Christians to thinking: evidently we have not understood idol-worship. Sandwich Island Sketches, by Dr, C. L. Tisdale, is the first of a series of instructive and interesting sketches of the Little Kingdom. Crossing the Mediterranean, by Anna Ballard, will recall some of the most remarkakle scenery of the world to those who have made the same trip. The Shakers, by Dio Lewis. will give new ideas to those who have not studied that singular people. Weight of the Human Brain, by Dio Lewis, will deeply interest all who keep up with modern thought in this important field. A True Story of Lake George, by Mrs. Lillie Devereux Blake, is one of the best of this charming writer's stories. A True Ghost Story, by a Boston Lawyer, is capital, and gives one a vivid notion of a high sense of honor and duty among college men, Open the Cage Door, Treatment of Prisoners, and Treatement of the Insane, all by Dio Lewis, will be read with interest hy the philanthropic. House-Drainage, by Colonel Waring, of Newport, is a thoughttul paper by an eminent expert. A Fine Complexion, is by a well-known lady writer, who knows what she is talking about. Our Brains and Nerves, by Dio Lewis, is in his happiest vien. The Check-Rein, by Hon. Geo. T. Angell. The Hygienic Department, is full of variety and interest. Beer, is by one of our best writers upon this class of subjects. Diphtheria, by Dio Lewis, is a clear discussion of the causes, prevention and treatment of this dreaded malady. About Nursing, by Dr. Dewis, is commended to young women. The Fashions (illustrated), Aunt Bonncybell, will he read with eager interest by the ladies, and it will make them think too. Our Cooking School, by Miss Julia Colman, grows better and better. Stray Thoughts, will interest and amuse.

THE *Woodworker* says:—Oshkosb, Wis., is noted for its sash, doors and blinds. There are eight sash, door and blind factories, which produce annually, as shown by last reports of the manufacturers, 600,000 doors, and windows and blinds in proportion. When it is considered tbat Oshkosh is only one of many cities engaged in this business. an idea of the enormous annual consumption of these articles may be arrived at.

THE *Woodworker* says:—First-class woodworking machinery is being rapidly introduced into many sections of the Southern States. Factories are springing up on every hand. On account of their superb timber growths. Kentucky, Tennessee, North Carolina, Louisiana and Arkansas, are the most favored localities at present. Saw mills, shingle mills, barrel and stave factories are busy and the number is rapidly increasing.

THE Ogemaw *Herald* learns that it is the intention of Messrs. Wells, Stone & Co. to build and put into immediate operation a large long timber mill on the line of the new road running througb their lands. The intention is to cut Norway pine into bridge and car timber of all lengths up to 65 feet, and ship by rail direct from the mill to all points demanding this necessary staple. At a glance it will he seen that sucb an enterprise will be a source of remuneration to the projectors. It is understood that tbe mill will he ready for work this present season.

THE Birtle correspondent of the Winnipeg *Times* says:—A company comprising Messrs. D. W. Comming, of Birtle, J. C. Boyd, Col. Tisdale, & Alex. McColl of Simcoe, S.S. Fuller, of Stratford, and T. R. Fuller, of Toronto, has obtained several extensive and valuable timber limits in the Riding and Duck mountains, which they intend working on a large scale. Mr. Boyd has been up inspecting three of the limits which are situated on Bird Tail river and which he reports to be capitally situated and composed of splendid timber. He leaves for Ontario at once to make arrangements for shipping milling machinery to this point, and the company intend putting a gang of men into the woods this winter.

AN organization meeting of the Algoma Lumbering Company was held at Ottawa on Sept. the 27. The object of tbe Company is the carrying on of a general lumbering business in the North-west. The head office will be at Fort William, the Company having extensive planing mills and docks there now in operation for dressing and shipping lumber. Fort William is also an important distributing point as all tbe south going trade centres at that place. The capital of the Company is $40,000, all of which is paid up, and the five directors are the only shareholders of the Company. The following are the officers and directors appointed at the meeting:—G. A. Griery, President; J. C. Edwards, Vice-President; George A. Priest, Managing Director; John Grier, B. Grier, Directors; and J. Wardrope, Secretary-Treasurer.

MAPLE FLOORING.

It is of late years that maple for flooring has come into general use in the western markets, and since its introduction the demand for it has increased rapidly. It was the prediction of many that in time there would really be no end to the demand, but already it is less active than it has been, and the only reason that can be assigned for it is the favor into which yellow pine is growing. To our knowledge, several large buildings have gone up in this city, in which the southern lumber has been used as flooring, and for which purpose maple was the second choice of the builders; but in this case as in all others, a man takes his first choice, if he can do it for the same money. Yellow pine for flooring is growing in favor every day, and maple is giving way to it. There is no danger, however, that maple flooring will be wholly crowded out. It makes an excellent floor, and it has friends which will use it instead of any other kind of wood. Its sales will be very limited, though, in comparison to wbat they would be had not yellow pine come into the field as a competitor.—*Northwestern Lumberman.*

Shipments for Detroit.

DETROIT, Oct. 2.—The lumber shipments by the lake during September were 29,641,000 feet from East Saginaw, and 73,870,000 feet from Bay City. East Saginaw shipped 6,709,000 shingles and Bay City 18,537,000. Total lumber shipments from Saginaw river from the opening of navigation to October 1st, were 597,189,967 feet against 656,568,846 feet for tbe corresponding period of last year. The total shingle shipments to October 1st this year were 117,539,000 against 136,282,000 last year. It is estimated that the lumber cut of the Saginaw river saw mills will fall short of that of last year 175,000,000.

The London *Post* says:—McKenzie Bros. and Campbell of Kirkfield have this season already shipped rbout 30,000 telegraph poles for the Western Union. The business bas been greatly facilitated hy the wide guage. A large quantity of cedar and other wood has also been taken out.

THE London *Post* says:—During the early summer months the bulk of the lumber traffic was carried down the Whitby line and shipped from Whitby harbour. Just now the beaviest lumber trains are sent over the main line to Port Hope. Has Port Hope stolen the handling of lumber from Whitby?

Do not delay, if suffering any form of Bowel Complaint, however mild apparently may be the attack, but use Dr. Fowler's Extract of Wild Strawberry. It is the old reliable cure for all forms of Summer Complaint that require prompt treatment. Ask your druggist and all dealers in patent medicines.

THERE is no excuse for suffering from Headache, Constipation and all the wearying train of symptoms of a disordered liver, when Burdock Blood Bitters is an unfailing remedy, and only costs One Dollar a bottle. Why suffer on without a trial? 25,000 bottles sold during the last three months, with almost universal satisfaction.

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DR. E. C. WEST'S NERVE AND BRAIN TREATMENT, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by use for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Prorpietors, Toronto.

McCraken, Gall & Co.,

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LUMBER MERCHANTS

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Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c. American and French VENEERS.

Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.

Yard: Cor. Wellington & Strachan Aves.

FACTORY: Corner Soho and Phœbe Streets.

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L5 TORONTO, ONT. 1y

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A MAN

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CHICAGO.

Burdock BLOOD BITTERS

Market Reports.

MONTREAL.

From Our Own Correspondent.

Oct. 10.—Yard prices are as follows:—

Pine, 1st quality, ℘ M	$35 00@40 00
Pine, 2nd " ℘ M	22 00@24 00
Pine, shipping culls, ℘ M	14 00@16 00
Pine, 4th quality deals, ℘ M	11 00@12 00
Pine, mill culls, ℘ M	10 00@12 00
Spruce, ℘ M	10 00@13 00
Hemlock, ℘ M	9 00@10 00
Ash, run of log culls out, ℘ M	20 00@25 00
Bass, " " ℘ M	17 00@20 00
Oak, ℘ M	40 00@50 00
Walnut ℘ M	60 00 100 00
Cherry, ℘ M	60 00@80 00
Butternut, ℘ M	35 00@40 00
Birch, ℘ M	20 00@25 00
Hard Maple, ℘ M	25 00@30 00
Lath, ℘ M	1 60@ 0 00
Shingles, 1st, ℘ M	3 00@ 0 00
Shingles, 2nd, ℘ M	2 50@ 0 00

As will be observed from our list there has been no change in prices since the date of our last report. Retail business has been fair for the summer, but there has been nothing much done in a large way, as people are buying nothing but what is absolutely wanted; probabilities are there will be a little more activity from this out, as people will now be stocking up for the winter. Prices have not varied much lately and no doubt wholesale buyers could at present make very satisfactory terms with manufacturers. The American demand seems to have ceased, as there have been no enquiries lately. Laths are just about holding their own.

CORDWOOD.

Wood is coming in freely and there is more on the Canal bank now than there has been all summer. Prices are a trifle weaker, but not nominally lower, and it is thought that no decline in prices will take place this fall. The demand lately has been brisker than for some time past. Wholesale prices are as follows:

Long Maple	$ 7 50
Short "	6 50
Long Birch	7 00
Long Beech	6 00
Short "	5 00
Tamarack	5 00@6 00

TORONTO.

From Our Own Correspondent.

Oct. 10.—Retailers have all the demand they desire, so far as I have been able to learn there is not a single complaint, teams and men are all busily employed attending to the wants of customers. To meet this demand wholesale dealers are placing on the local market double the quantity required of some lines of lumber, so that prices have to some extent weakened. This is more especially the case in the coarser grades of boards, prices for which, by car load, are fully $1.50 to $2.00 per M. lower than at the commencement of the season. This need not have been the case had shippers been alive to their own interests a large portion of this overplus stock could have been held back, instead of shipping forward and taking up all the available space in the various railroad yards. Consumers and retailers alike are quick enough to avail themselves in cases of gluts in the market.

Since the date of my last letter, shipments from our docks have been fairly active, the following quantities having gone over the rail of vessels since last writing you—1,000,000 of shingles and 3,750,000 feet of lumber. So that the quantity now on our docks have assumed only normal proportions, and will doubtless be still further thinned out before the close of uavigation.

On a former occasion I alluded to the action taken by the Midland Railway Company in charging their customers for shunting cars of lumber to various switches within the city limits. Immediately after the publication of that letter the charge was done away with, and Mr. White assured the customers of the road that lumber should be placed at any point within the city proper to which they had access, free of all charge, but the love of the almighty dollar seems to have proved too strong, and fresh notices have been issued to all their patrons informing them that this method of trying to filch the last possible dollar from the pockets of the lumbermen will again go into operation, so that the charge on a car of 24,000 pounds, from Midland to the western confines of the city, will now amouut to $20.40 to the yard and $3.50 shunting, including the C. V. R. R. charge for the use of switch, making in all $23.90. Mr. Robt. Kerr of the N. & N. W. R. R. is credited also with inaugurating this briliiant stroke of railroad policy, promising on his part to adopt a similar tariff for shunting, but all such methods will surely react upon its authors in due course of time.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℘ M	3 00
Sawn Lath	2 50

QUEBEC.

The correspondent of the Toronto *Globe* writing on Sept. 29th, says:—Our market continues dull and depressed, with few sales. In Ottawa timber, one very choice raft of 70 feet has lately changed hands at 36 cents; one of 45 feet at 22 and 23 cents; and one of 51 feet at 23½ cents, with red pine of 45 feet at 16 cents. It is currently reported also that a contract has been made for the coming season's production of the Baptist Mills at Three Rivers, but as the sale was effected on private terms, the figures have not transpired. They are, however, said to be low. Some 12,000 to 15,000 pine deals, roughly valued at from $6,000 to $8,000, were accidently destroyed by fire yesterday in the cove of Benson Bros., New Liverpool, opposite the city. Fully insured.

The Quebec *Chronicle* of Oct. 5, says:—This week has been about as dull a one as we can remember, and since ws issued our report last week we believe only one raft has changed hands, that being one of 47 to 48 feet, at 20 cents. Several new rafts have come to market, but we do not think there is any inclination on the part of shippers to invest at present. In hard woods there is no animation, and the general belief is that a good deal of this timber will winter on manufacturers account.

WINNIPEG.

The Winnipeg *Commercial* says:—Business continues very fair, and about as active as could be expected at this season of the year. Quotations are as follows:—Pine lumber, 1st, common boards, dressed, $26.50; 2nd, dressed, $25.50; 1st, do rough, $26.50; 2nd, do., $25.50; sheathing, rough, $25; timber, 16 feet and under, $24; do. over 16 feet, for each additional 2 feet, $1; dimension and joists 16 feet and under, $24; do. over 16 feet for each $1; fencing, $25; 2 and 3 inch batttens, $30; A. stock boards, all widths, $50; B. do., $45; C. do., $40; D. do., $35; 1st clear. 1, 1¼, 1½, and 2 in, $60; 2nd do. $56; window and door casings, $50; base boards, dressed, $50; 1st pine flooring, siding and ceiling $40; 2nd do $35; 3rd do., $30; ½ inch split siding, dressed, $30. Spruce lumber—timber 16 feet and under, $22; do. over 16 feet, for each additional 2 feet, $1; dimensions and joists, 16 feet and under, $23; do. over 16 feet, for each additional 2 feet, $1; boards, $22; 1st flooring, siding and ceiling, $28; XX shingles, $5.25; Star A shingles, $5.25; X shingles, $5.00; A do. $4.50; lath $4.50.

BOSTON.

Cotton, Wool and Iron of Oct. 6, says:—General business is moving along on quite a firm basis for desirable supplies of pine, and there is a good steady consumptive demand. Western fine common, selects and uppers are held with particular steadiness, and are well in hand. Eastern luuber is in active movement, with both spruce and hemlock stiffly held. Laths are also in strong position and high. Southern pine is moving quietly and steadily. As to hardwoods, there is little change to note. Desirable walnut is quite steady. Poplar is in excessive stock and slow of sale. Choice dry cherry is in good request. Light colored ash and oak find a ready market.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℘ M	$53 00@55 00
Pine, fourths	48 00@50 00
Pine, selects	43 00@45 00
Pine, good box	22 00@32 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℘ M	28 00@30 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1½-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	40 00@43 00
Pine, inch siding, common	12 00@15 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℘ M	40 00@43 00
Ash, second quality, ℘ M	25 00@30 00
Cherry, good, ℘ M	60 00@85 00
Cherry, common, ℘ M	25 00@35 00
Oak, good, ℘ M	40 00@43 00
Oak, second quality, ℘ M	20 00@25 00
Basswood, ℘ M	25 00@30 00
Hickory, ℘ M	40 00@40 00
Maple, Canada, ℘ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℘ M	35 00@40 00
Shingles, shaved, pine, ℘ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℘ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

OSWEGO, N. Y.

From Our Own Correspondent.

Since our last report the market has been extremely dull and receipts small. Dealers are getting in odds and ends and preparing for winter. Lake rates are $1.20, and canal $2.00 to Albany, and $2.75 to New York.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

CHICAGO.

The *Northwestern Lumberman* of Oct. 6, says: The wind for the past week has been favorable for the lumber luggers, and a fleet has come along every day. The arrivals at this port, up to Wednesday, were 265, against 204 the week preceeding, and the usual proportion at the sales docks has kept the market fully supplied with offerings. Sales were made with fair dispatch until Tuesday, Monday showing an especially brisk business, about 25 cargoes having been disposed of on that day. But after that the movement was slower, because the yard docks had become cumbered with unpiled lumber, aud the arrivals coutinued without abatement. The yard men saw their opportunity, and taking the alleged drop in dimension in the alleged price list for a club, they pounded away at that class of stock with their accustomed zeal and vigor. The stuff stood up well under the slugging, and only slight concessions were realized. Cargoes were sold as low as $9 for short piece stuff, but not enough changed hands at that figure to make it necessary to alter the quotations. Meager or ordinary arrivals will probable restore the tone prevailing before this. No. 2 inch stock did not feel the load on the market like dimension, the offerings generally being purchased at former prices, or very nearly so. Good stock is still wanted in excess of arrivals, and a cargo of such lumber is eagerly competed for as soon as it swims in the market basin.

Quotations are as follows:—

Short dimension, green	$ 9 25@ 9 75
Long dimension, green	10 00@11 00
Boards and strips—No. 2	10 50@12 50
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 10@ 2 20
Extra A	2 40@ 2 60
Lath	1 60@ 1 75

Receipts of lumber, shingles, etc., for the week ending Oct. 4. as reported by the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	Shingles.
1883	69,267,000	27,249,000
1882	71,500,000	27,555,000

FROM JANUARY 1, 1883, TO OCTOBER 4, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	1,383,850,000	901,890,000
1882	1,605,610,000	667,818,000
Increase		234,072,000
Dcrease	187,533,000	

STOCK ON HAND SEPT. 1.

	1883.	1882.	1881.
Lumber	576,384,049	580,890,583	481,154,279
Shingles	371,285,690	226,806,750	219,628,000
Lath	59,941,215	42,996,432	37,556,820
Pickets	1,888,036	2,678,476	2,030,210
Cedar posts	473,402	218,309	256,235

LONDON.

The *Timber Trades Journal* of Sept. 22, says: The trade were well represented at Messrs. Simson & Mason's great sale of Wednesday last; and though no recovery in values was to be traced in the prices the unreserved goods fetched, there appeared to be a more hopeful spirit amongst those present, and bids were plentiful, if only at a very moderate limit. Nothing seemed to hang fire, and notwithstanding the low average the sale realized throughout, taking into consideration the limited quantity of good Swedish deals, &c., that were submitted, we think it compared favourably with other sales in respect to prices generally.

LEITH.

The *Timber Trades Journal* of Sept. 32, says: The arrivals show a slight improvement over last week's, and several large consignments are daily expected. White Swedish 6½ × 2½ battens are not very plentiful here, and bid fair to become more scarce as the season advances.

On Tuesday last Messrs. Mitchell, Thomson, & Co. exposed for public competion at Granton a large and varied assortment of American and Baltic goods. Considered alongside of the large attendances this firm as a rule attract to their sales, yesterday's turn out was certainly disappointing; still a good few large buyers were present, the town being perhaps better represented than the couutry. The sale as usual began with the waney yellow pine, the first lot going at 2s. 9d. per cubic foot, the top price of the sale for this class of goods. The lowest figure was 2s. 5d., the average price being about 2s. 7d., a good portion of the shipment being cleared out. The larger timber of the cargo had been set on one side, and did uot bring forth any offers when exposed. American oak did not seem in great demand, one lot bringing 3s. 5d., and a few logs 3s. per cubic foot. Only one lot of Riga wainscot was sold at 4s., and red Memel fared little better, 14d. being all that could be got. As a rule large quantities of floorings and linings are cleared out at Granton, but this sale was an exception. Although several lots of 5½x1½ white flooring were sold at 11¾d. per superficial yard, the bids for linings were mostly all too low to enable the auctionee to go on.

A novelty was offered in the shape of a cargo of Sequoia redwood. Mr. Thomson stated, before offering it, that this was the first cargo ever imported to the district, though a few odd parcels had found their way to the market previously. He further stated that the timber had been tried by several Edinburgh builders (whom he named) and found to give satisfactiou. The exposers further gave the tiuber a splendid character, stating that, after fourteen year under grouud, prices had been fonnd to be as fresh as ever. There certainly appeared to be

every inclination to give the timber a chance, as the consignment went off fast, many cabinet-makers being among the purchasers. The wood is of a dark red color, and is very heavy, seeming to have a great deal of water in it, which, perhaps, accounts for the difficulty with which it is said to burn. An unsaleable portion of the consignment seemed to be a large quantity of shingles for roofing purposes, 2s. 6d. per bundle being the highest offer.

LIVERPOOL.

The *Timber Trades Journal* of Sept. 22, says: The importation of all kinds of wood goods continues to be far beyond the wants of the trade, and until there is a very marked improvement in the general business of this district, no relief from the present state of depression need be looked for, unless shippers can stop the present glut of supplies which are at present being put upon the market.

This is especially the case with Canadian, New Brunswick, and Nova Scotian goods, such as deals and birch timber, which have come forward far too freely; and, further, they have been pressed upon the market by means of auction sales, so that prices have been reduced to a point below which they apparently cannot further go.

LIVERPOOL TIMBER SALES.

On 14th Sept. Messrs. A. F. & D. Mackay held one of their periodical auction sales of spruce deals, birch timber, &c., at which there was a fair attendance of buyers; and although a fair amount of competion was shown, prices were a shade lower than previous sales.

On Wednesday, Messrs. Farnworth & Jardine offered a cargo of Dalhousie spruce deals, birch, spruce, and pine timber, and although there was a good attendance of the local trade present nothing excepting the spruce deals was sold, all the timber being withdrawn owing to want of bidding.

Immediately afterwards Messrs. James Smith & Co. offered a good assortment of various descriptions of deals, timber, &c., consisting of St. Sohn, N. B., spruce deals, Quebec pine deals, and other goods, but with the exception of three lots of Bay of Islands, Newfoundland pine little else was sold.

The sale was one of the poorest this firm has ever experienced, and the buyers present evidently had got their upplies, and were apparently only there to watch proceedings.

NORWAY.

The *Timber Trades Journal* of Sept. 15, says: Last week we called attention to the necessity there was, if the markets here were to recover, for the shippers abroad to curtail their production, and in respect of Norway we seem to see something like a moderate cutting for next year and the following one, but the full effect of which will probably not be felt till 1885. A correspondent who has recently been spending some time in Norway visiting the various mills, and whose *bona fides* we have no reason to doubt, informs us that the log floatage to Drammen will this year be considerably less than was anticipated.. The annual floatage to Drammen is 180,000 to 200,000 dozen logs, but this year there will be only 50,000 to 60,000 dozen, less than a third of the ordinary supplies.

From the Glommen and the other great tributary streams the floatage, we understand, will be much the same as last year, viz., about 280,000 to 300,000 dozen logs.

The trees in this part of Norway—in fact, pretty generally thougout the country—are bought of the small peasant proprietors, and these latter are just now unusually stubborn in insisting on former prices, while the buyers on their side show equal obstinacy in declining to purchase except at lower figures than previously paid; as a consequence of this business at the annual trade fairs was positively nil.

The same correspondent tells us that, from what he gathered during his stay, the traders in Norway have the impression that no speedy improvement in the great markets of England, &c., is to be expected, and, acting on this conviction, they (the mill-owners) are by no means anxious to purchase logs for conversion, except at reduced prices; so that it stands to reason, if this state of things continues, the production for the forthcoming year must necessarily be very much curtailed. It is said that the present prices obtainable in the markets of the United Kingdom barely cover cost, which we can fully believe, and hence there is no real inducement to continue trading except on the most confined scale.

It is easy to understand how disagreeable it is to a large producer who has been accustomed to employ hundreds of hands in his mills, cutting thousands of standards of deals, to bring his establishment down to an all-round reduced scale, and no doubt it is this disinclination to acknowledge that they have been working at a loss which keeps many of these large mills working full time when really they ought to be curtailing their output in every possible way.

With regard to the attitude of the peasantry who have timber to sell, and who, when they wanted money, had to resort to the fairs to raise it by disposing of their trees to the manufacturers, a great alteration has taken place; the branch banks now established in the interior, especially in the Valley of the Glommen, from whence two-thirds of the timber is supplied, have come to the assistance of the small forest owner, and he can at a pinch raise money on the timbers as it grows, without the necessity of going to town at all. Formerly men of this class were entirely dependent on the Christiania merchants, to whom they looked to put them in funds when they needed it. If the peasant can maintain this independent attitude, it is evident the Norwegian timber trade must meet with an interruption.

Whether the same condition of things exists in the neighboring country of Sweden our correspondent does not say, but doubtless the position is not materially different in respect to the prime cost of growing wood.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec:

SEPT. 27.—Stokes & Kelly, walnut Bowen's Cove.

J. R. Booth, white pine, &c., St. Lawrence Docks.

Grant & Miller, white pine, &c., Cap Rouge.

D. Moore, (2), white pine, &c., Cap Rouge.

British Canadian Timber Co., white pine, &c., St. Lawrence Docks.

J, R. Booth, white pine, &c., Cap Rouge.

Jos. Bolduc, deals, Bridgewater cove.

F. B. Howard, deals, Lake St. Joseph.

J. B. Grier, white pine, &c. Cap Rouge.

OCT 4.—Jas Reed, deals, Mill cove.

Stokes & Son, staves, Dobell's cove.

Muir Bros, staves, Bowen's (Sillery).

Estate of late John Bonfield, white pine, St. Lawrence Docks.

Fraser & McCoshen, white pine, St. Lawrence Docks.

Simon Wigle, staves, Union cove.

Flatt & Bradley, staves, St. Michael's cove.

J. Cockburn, white pine, &c., Cap Rouge.

Muir Bros., oak, &c., Bowen's (Sillery).

MONTREAL.

The *Gazette* says:—The wet weather of the past few days has been a great drawback to the local trade, as buyers will not operate when stocks show to disadvantage, consequently a very limited business has been done during the week both in hard and soft woods, There has. however, been an active enquiry for laths at the late advance, sales being reported at $1.70 per 1,000, and some dealers find great difficulty in satisfying the demand. Advices from Ottawa state that a good demand exists for pine, which is moving out pretty freely by barge. There is still a brisk movement of deals to British ports, and rates are quoted at 65s to 67s 6d.

Falling Leaves.

"There is something inexpressibly touching in the fallen leaves," sighs an esteemed author. There is, there is, indeed. It's when you slip on one of the articles on a wet morning, and touch the unsympathetic pavement. But there is in reality touching language—language uttered from the heart, yes, from the depths of the soul, in the many thousands of testimonials and letters (unsolicited) that come from those who once were sufferers from lung diseases, asthma and consumption, and who have used N. H. Downs' Vegetable Balsamic Elixir, and have been restored to their wonted health and activity.

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70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

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Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally.

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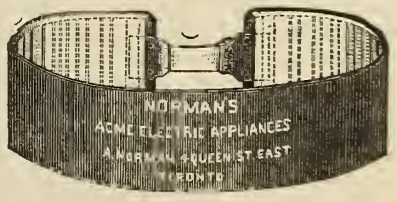

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Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

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Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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APPLICATION FOR INCORPORATION.

The following notice appears in the *Canada Gazette* :—

"Notice is hereby given that within one month after the last publication of this notice in the *Canada Gazette*, application will be made to His Excellency the Governor General in Council under "The Canada Joint Stock Companies Act, 1877," for letters patent incorporating the undermentioned applicants and those other persons who may become shareholders in the proposed company as a body corporate and politic for the purposes hereinafter mentioned :—

1. The proposed name of the company is "The *Peterborough Review* Printing and Publishing Company" (Limited).

2. The purposes for which such incorporation is sought are :—

(*a*) To purchase and acquire from Messrs. Toker & Co. the good will and right to print, publish and issue the newspaper called the *Peterborough Review*, both daily and week editions, and also the good will and right to print, publish and issue the newspaper called the *Canada Lumberman*, both being published by the said Toker & Co., at the Town of Peterborough, in the County of Peterborough, and Province of Ontario, together with the general printing and publishing business, book-binding and genera stationery business carried on by said Toker & Co., at the said Town of Peterborough, together with all plant, machinery, stock property and assets used by the said Toker & Co., to print and publish said newspaper and carry on their said business ;

(*b*) And after such purchase and acquirement by said proposed company, the printing, publication and issue by them, at the said Town of Peterborough, of the said *Peterborough Review*, both daily and weekly editions, and also the printing, publication and issue by the said company, at the said Town of Peterborough, or at such other place in the Dominion of Canada as may from time to time be deemed advisable, of the said *Canada Lumberman*, and also the carrying on by the said Company of a general printing and publishing business, book-binding in all its branches and a general stationery business, at the said Town of Peterborough and at such other place or places throughout the Dominion of Canada, as may be deemed advisable.

3. The chief place of business of the said company is to be at the Town of Peterborough, in the County of Peterborough, in the Province of Ontario.

4. The amount of the capital stock of the said Company is to be forty thousand dollars.

5. The number of shares is to be eighty, and the amount of each share five hundred dollars.

6. The names in full and the addresses and callings of each of the applicants are John Carnegie, of the said Town of Peterborough, printer and publisher, Edward John Toker, of the said Town of Peterborough, printer and publisher ; John Hilliard Carnegie, of the said Town of Peterborough, Gentleman ; George Hilliard, of the said Town of Peterborough, lumber manufacturer, and Robert Archibald Morrow, of the said Town of Peterborough, Gentleman.

7. The said John Carnegie, Edward John Toker and John Hilliard Carnegie, all of whom are residents of Canada, are to be the first or provisional directors of the proposed company.

8. The said company intend to transact business throughout the Dominion of Canada.

9. And notice is also hereby given that the said applicants will in their petition ask for the embodying in the letters patent of the following provisions :—

At each annual meeting it shall be the duty of the shareholders present to estimate and establish by resolution the then actual valuo of the shares of the stock of the company, such estimate to be based on the financial result of the operations of the company as exhibited by the statement of its affairs then before them, and in case at any time during the then next ensuing year any share or shares in the stock of the company are offered for sale, whether under execution or otherwise, and the sale thereof has not been enterod on the books of the company, or if any share or shares of the company have become transmitted by bequest, inheritance, or in any other way whatsoever, then the said company shall, during the two months next after such sale, offer for sale or transmission has been notified to the company, have the privilege of acquiring such share or shares so sold or to be sold or so transmitted as aforesaid, upon payment or tender of the price of such share or shares calculated at the value thereof as established at the then last annual meeting, the company having the first preference of purchase and then the shareholders, and in such order and on such conditions as regards the respective shareholders as may be fixed by the By-laws of the company.

R. H. DENNISTOUN,
Solicitor for the said applicants.

Dated at the Town of Peterborough, this 26th day of September, A.D., 1883.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Aug., and for the first eight months of the year :—

MONTH ENDED 31ST JULY., 1883.

Timber (Hewn).	*Quantity. Loads.*	*Value. £.*
Russia	60,763	117,483
Sweden and Norway	62,204	100,796
Germany	40,513	91,569
United States	11,254	41,082
British India	1,502	21,883
British North America	110,421	534,577
Other Countries	30,282	41,239
Total	316,939	948,629
Timber (Sawn or Split, Planed or Dressed).		
Russia	222,789	528,232
Sweden and Norway	219,339	474,235
British North America	243,181	638,744
Other Countries	31,329	99,156
Total	716,638	1,740,367
Staves, (all sizes)	17,406	86,775
Mahogany (tons)	3,288	32,155
Total of Hewn and Sawn	1,033,577	2,688,996

EIGHT MONTHS ENDED 31ST AUG., 1883.

Timber (Hewn).		
Russia	185,004	364,566
Sweden and Norway	390,974	615,774
Germany	212,288	565,776
United States	85,802	323,927
British India	34,339	481,690
British North America	170,065	805,221
Other Countries	260,194	352,478
Total	1,338,666	3,509,432
Timber (Sawn or Split, Planed or Dressed).		
Russia	561,289	1,294,723
Sweden and Norway	1,033,030	2,340,498
British North America	605,892	1,530,061
Other Countries	235,000	765,391
Total	2,435,211	5,930,673
Staves (all sizes)	81,373	360,896
Mahogany (tons)	29,784	304,388
Total of Hewn and Sawn	3,773,877	9,440,105

A VISITOR FROM NATAL.

Mr. John Nicol, of Durban, Province of Natal, South Africa, has been in Ottawa, Mr. Nicol is accompanied by Mr. Thos. Bell, of Messrs. D. W. Bell & Co., general merchants, of London, England, who are also his European correspondents. The objects of their visit to Canada is chiefly pleasure, but they come also to see improvements that might exist and look into matters connected with the business in which they are interested. In conversation with a *Free Press* reporter Mr. Nicol said that he had been a resident of Natal for twenty-two years, during which time he had never seen snow. He described the climate as one of the finest possible, the average temperature being all the year round betwcen seven-five and ninety. The extreme heat was sometimes as high as a hundred and twenty, while the lowest reached was about sixty-five above zero. Mr. Bell here joined Mr. Nicol and in reply to an enquiry by the reporter said that Mr. Nicol was the largest contractor and building material manufacturer in his country. In the course of his business he used a great deal of timber and lumber, having to take timber chiefly from the Baltic. In connection with his pleasure trip he intended making a thorough study of the manufacture of lumber, with a view of adopting improvements in his own country. He visited the saw mills of Mr. J. R. Booth and Mr. McLaren, and was perfectly astonished at what he saw. He thought the mode of manufacturing was perfection and the product good. In his town he would see if it were practicable to import lumber or timber from Canada. Durban is the largest town in Natal and has a population now of about 8,000. Messrs. Nicol and Bell left by the C. P. R. and Grand Trunk for the west, They stop over at Toronto, Detroit and Chicago, and will visit Bay City and Saginaw, thr great lumber producing centres of the United States. After visiting the principal cities across the line they will leave for England.

AMBER.

Some very interesting researches have recently been made on the flora of the amber-bearing formations of East Prussia by Messrs. Goeppert and Menge. In ancient times there must have been in this part of Europe a group of conifers comprising specimens from almost all parts of the world. Among the splendid specimens of the California coniferæ were the redwood, the sugar pine, and the Douglas spruce ; and of the examples of the Eastern States were the bald cypress, red cedar, thuya, and the *Pinus rigida* from the eastern coasts of Asia were the Chilian incense cedar, the parasol fir, the arbor vitæ, the glyptostrobus, and the thuyopsis ; and the scotch fir, the spruce, and the cypress of Europe, and the callitris of Southern Africa. It appears that the deposits of amber for which the Baltic is noted are the product of gonerations of these resin-bearing trees. The richest deposits are situated along a strip of coast between Memel and Dantzic, though the real home of amber has been supposed to lie in the bed of the Baltic between Bornholm and the main land. It rests upon cretaceous rocks and consists chiefly of their debris, forming a popular mixture known as blue earth, which appears to exist throughout the Province of Samland at the depth of 80 to 100 feet, and to contain an almost inexhaustible supply of amber. Immense quantities of amber are washed out to sea from the coast or brought down by rivulets and cast up again during the storms or in certain winds. Tho actual yield by quarrying is 200,000 to 300,000 pounds a year, or five times the quantity estimated to be cast up by the waves on the strip of coast above mentioned.—*London Times.*

ST. JOHN N.B,

The *Daily News* says :—For some time past there has been a considerablo traffic over the Intercolonial in ship's masts and spars. They are shipped at Point Levis and transported to Halifax and St. John. They cover two aud a half to three cars, the longer pieces being nearly ninety feet in length. This trade was opened last year by Charles Nevins, of St. John, and greatly increased during the present season. Timber of this kind is becoming scarce or inaccessible in New Brunswick. The expense of loading and carriage is a very considerable item when brought from Quebec. During the past week a little more activity has transpired in this line, but prices are without alteration. Local coutractors are enquiring for certain kinds of stock. This is, of course, only what may be expected as the season advances. As a rule there is generally a spurt in the autumn for material to complete jobs in hand before the winter sets in. Many people are now suddenly discovering that they must have certain work done at once, hence the rush.

QUEBEC.

The *Chronicle* of Sept. 28 says :—Since our last quotations there has not been much done in the way of sales, though it is reported that a lot of Three River Deals, havo beeu sold on private terms. In Ottawa Timber we hear of one very choice raft, about 70 feet, having changed hands, reported at 36 cents ; a raft of 45 feet, at 22 cents and 23 cents. Also, a raft of 51 feet at 23½ cents, with Red Pine of 45 feet, at 16 cents.

It is currently reported on the street, that a contract has been made for the coming season's production in both Pine and Spruce Deals of the Messrs. Baptist's mills, Three Rivers. The sale was effected on private terms, and figures have not trauspired, but prices said to be low.

REDUCING THE CUT.

The Chicago *Northwestern Lumberman* says : A Wisconsin lumberman of years of experience, a man of superior judgement, aud one who looks couditions squarely in the face, made the remark in the office of the *Lumberman* a few days ago that the welfare of the lumber business for 1884 would depend on a retrenchment of operations the coming logging season. If 150 of the manufacturers of the Northwest could be brought together, and were to express their views on this question, it is doubtful if one of them would disagree with the Wisconsin gentleman to an extent that the universal verdict would not be that retrenchment is necessary. Every intelligent lumberman in the three states knows that the cut of logs for the winter should be a light one. He knows that the mills last season cut too much lumber, and that an endeavor to work off the stocks this season has resulted in lowering prices. He can see new mills being built, and new lumbering sections opening up. The product of the Southern mills is taking the place of white pine to an increased extent every year. All these conditions are plainly seen, and what action will be taken ? No arguments are needed, for the position is thoroughly understood. In the Saginaw and Muskegon districts, and in Wisconsin, there is talk of reducing the cut, but whether it will be carried into effect is another question.

If you would escape the ravages of that scourge of the summer season, Cholera Morbus, keep Dr. Fowler's Extract of Wild Strawberry at hand for use. In that and all other forms of Bowel Complaint it is infallible.

REST not, life is sweeping by, go and dare before you die, something mighty and sublime leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co., Portland, Maine.

$500 Reward !

We will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated, Large Boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Makers," 81 & 83 King St. East, Toronto, Ont. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. ORMOND & WALSH, sole authorized Agents for Peterborough Ont. w46d112t22

BAXTER'S MANDRAKE BITTERS

THE ONLY VEGETABLE CURE FOR

DYSPEPSIA,

Loss of Appetite, Indigestion, Sour Stomach, Habitual Costiveness, Sick Headache and Biliousness.

Price, 25. per bottle. Sold by all Druggists.

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY

CURES

CHOLERA

CHOLERA INFANTUM

DIARRHŒA,

AND

ALL SUMMER COMPLAINTS

SOLD BY ALL DEALERS.

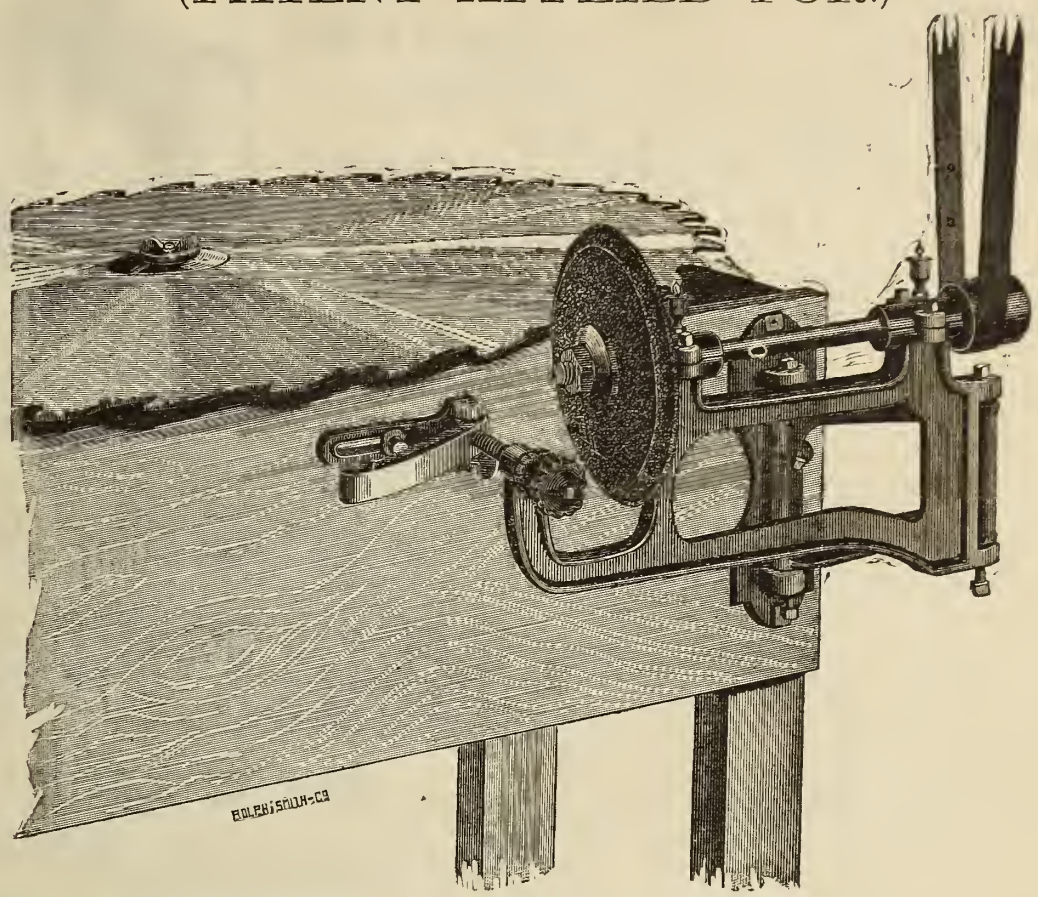
ROGERS' SAW GUMMER

(PATENT APPLIED FOR.)

No Heating!

Quick!

Simple!



Exact Work!

Cheap!

Complete!

POSITIVE STOPS! ADJUSTABLE GUIDE! Every Tooth made exactly alike!

JUST WHAT IS WANTED in every Saw-mill in Canada!

A REVOLUTION IN GUMMING SAWS WILL BE EFFECTED WHEREVER

ROGERS' SAW GUMMER

Is Introduced to replace Burr Gummers, or Grindstones, or where Emery Wheels have been run in the usual way. Every Machine Guaranteed to work as represented or No Sale. *It works EASILY; is so SIMPLE and COMPLETE that Sawyers can keep their Saws CONSTANTLY in FIRST-CLASS ORDER and thus LARGELY INCREASE the DAILY OUT-PUT.*

Price Complete, with Countershaft - - $40.00.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

☞ Manufacturers of **HART'S PATENT EMERY** and **CORUNDUM WHEELS.**

FORESTRY PRESERVATION.

The London *Times* in an article on the late movement of the Ontario Government in this direction, says: "At the instance of the Ontario government an exhaustive report upon the necessity of preserving and replanting forests has just been compiled by Mr. R. W. Phipps of Toronto. The subject is one in which increasing interest is being felt in the dominion, and the report in question deals with it very comprehensively." The *Times* gives a critique of the whole report, and concludes by saying: "What action the Ontario government may take on the strength of the recommendations is not yet known, but their appreciation of the importance of the subject is shown by their authorizing the gratuitous distribution of a large number of copies of the report among the farmers of the province."

Mr. Phipps, who has been given charge of the affairs, is going on with this important work with that systematic thoroughness which characterizes his management of whatever he takes in hand. Large numbers of circulars have been issued and numerous replies obtained. Many places in the settled portions of Ontario will be visited before winter, and when the lately issued report is laid before parliament at the coming session it will be supplemented by another, giving the experience of many individuals in different parts of Ontario in raising trees, stating the soils most suitable to the different varieties, the method of planting most suitable, the relative merits of raising from the seed, from seedings transplanted from nurseries, and from those taken from the forest; and results gained in each case, with much other information calculated to assist those intending to plant, and to prevent the losses and disappointments which have often resulted from mistakes in commencing or want of after care.

With earliest spring Mr. Phipps will make a tour through the great forest region in the northeast portion of Ontario, passing from the front near Kingston back towards and past Lake Nipissing, obtaining from lumbermen, farmers and other practical men their opinions as to the best methods of continuing in productive forest such portions of territory as it may be advisable to preserve in woodland, and of preventing the ravages of brush fires in all portions of the country. In the report which will deal with this matter we may expect from Mr. Phipps' well-known powers of description many vivid pictures of the scenery presented, and much valuable information concerning the resources of a large portion of our country not as yet well known to our population, while the report also will, judging from the last, be most useful to the general purpose of forestry—its principal aim.—*Toronto World.*

Timber and Houses in Skye.

Throughout the isles timber is a rare and precious article, most frequently the gift of ocean. The man who secures a good log of driftwood has obtained a prize worth having. It may have been a brave old tree, tempest-torn from its home in some distant forest, carried to the sea by rushing torrents, and perchange tossed by the waves and wafted to and fro by many a current, ere it drifted to its rest on these far isles. Or it may be the masts and spars, or perchance the cargo of some wrecked vessel—whatever its story it is treasure trove, and most deeply valued. Though encrusted with barnacles or riddled by pholades it can all be turned to good account; the smallest piece will make a stool or a settle, or a box or a part of a door; while large timbers become rafters—precious heirlooms, for a young couple cannot wed till they have accumulated enough rafters to support their thatch, and should they have occasion to "flit," the only part of their bothy that commands any pecuniary compensation is the roof, not the work only, but also the heavy thatch saturated with thick greasy peat-reek, (in other words with a thick coating of soot). This, when broken up, forms a valuable manure for the unfertile crofts.—*Temple Bar.*

SAND POWER.

The Virginia City *Enterprise* says:—"Jim Townsend has six of his arastras running to their full capacity. From a millwright who assisted in putting up the machinery we have some particulars regarding the novel apparatus, which is Mr. Townsend's own invention. The arastras are placed in a little sandy flat, where only sufficient water for drinking purposes and to moisten the ore operated upon is to be obtained. The arastras are actually operated by sand, which drives a large overshot wheel. On this wheel sand takes the place of water. It was at first Mr. Townsend's intention to run the arastras by means of a large windmill or windwheel, but as this wheel would run too slow at times, at other times so fast as to be liable to tear everything to pieces, and again would not run at all, he hit upon a regulator. This regulator is sand, a great pile of which has been raked up to the works. The windmill runs a belt containing a great number of buckets, and these carry the sand up to a big tank, just as grain elevators carry wheat in a flouring mill. A stream of sand being let out upon the overshot wheel, it revolves just as it would under the weight of a stream of water, and the arastras move steadily on at their work. When there is much wind, sand is stored up for use when calm prevails, so that the arastras are never idle. After a sufficient quantity of sand has once been accumulated, there is no more trouble on that score, the same sand being used over and over again."

THE CHEHALIS REGION.

The Chehalis Valley *Vidette*, in descanting upon the lumber facilities of Washington Territory, states that the timber of the Chehalis river and Gray's Harbor basin will yield from 2,000,000 to 10,000,000 feet to the quarter section, the forests being yet comparatively untouched. This lumber, of which there are said to be millions of acres lining the shores of the Chehalis, the Black, the Satsop, the Hoquoim, the Humtlips, the Johns and Elk rivers, and their scores of tributaries, embracing nearly 2,000 miles of waterway, down any and all of which logs can be run, in nearly all seasons, and most cases to the great central reservoir of Gray's Harbor. To this is added an entrance from the Pacific Ocean, "the great highway of lumber fleets—straight, short, broad—upon the bar of which there is over 20 feet of water at the lowest tides, and which for smoothness, safety and general good qualities and characteristics is far superior to any entrance north of San Francisco." Mill sites, with admirable advantages, are numerous. Logs are worth $5, the cost of saying is about $3, and the lumber sells at from $20 to $50.

BARRON'S

LUMBER DRYER

J. J. CURRAN, Inventor.

CURRAN & WOLFF, Proprietors for the U.S

39 & 41, Franklin Street, Chicago.

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Patentee and Builder for the Dominion of Canada,

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Send for descriptive Pamphlet containing list of parties using this Dry Kiln in the United States.

Dryers built and in working order by the following Companies:

James Shearer, Saw and Planing Mill, Montreal; James Crossen, (car builder), Cobourg, Ont.; Canada Pacific R.R., Perth, Ont.; Kingston Car Works, Kingston, Ont.; Pike & Richardson (Cooperage Co.), Chatham, Ont.; Essery Manufacturing Co., Sash, Doors, Blinds, Mouldings, &c., Toronto, Ont.; Grand Trunk R.R., London, Ont.; Steinhoff, Schnoor & Co., Staves and Heading, Wallaceburg, Ont. 12l1

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Hardware and Stove Manufacturers

AND FOUNDERS.

No. 2 Portable Forges.
Boring Machines.
Mortising "
Jack Screws.
Cook Stoves.
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Anvils and Vice Combined.
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ROBERTSON'S

LIGHTNING CANT DOG

☞STEEL RING,

The Lightest, Cheapest, and Most Durable Cant Dog in the World.

PETER ROBERTSON,

Chaudiere, - - Ottawa.

12l20

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills 17tf

SAVING THE TIMBER.

The *Lumberman's Gazette* says:—The first annual meeting of the National lumber Manufacturers' Association of the Northwest was held at Chicago on Wednesday. This association was organized for the furtherance of the interests of lumber manufacturers, and those present were united in their determination to adopt measures looking towards a better condition of affairs. The gentlemen who were present represented an industry connected with a wide extent of country comprising vast tracts of land in the three great lumber states—Michigan, Wisconsin and Minnesota. The *Inter-Ocean* in speaking of the important gathering says :—"Figures are difficult to comprehend sometimes, but an idea of the immense amount of capital represented in this association may be gained from the fact 3,000,000,000 out of the 8,000,000,000 feet of lumber manufactured in those states annually was represented, besides the capital in the mills, the logs in the booms and in the timber, in addition to shipping and other interests. The association also represents an interest which employs 70,000 men directly and many others indirectly. The meeting was remarkable for the unanimity of feeling in regard to the matter of over-production, and the views of the members are set forth in strong language in the resolutions given below."

The following preamble and resolutions were adopted.

Whereas, In the present depressed condition of trade in this country in all branches of man ufactured goods, taken in connection with a depressed condition of the products of the soil and farm, a depressed condition in which lumber deeply sympathizes ; and

Whereas, We cannot sse one prospect of an improvement in the price of lumber, except in such a curtailment of the amount of the lumber produced in the country as shall render the supply adequate. but not in excess of the ability of purchasers to consume ; and that in this view of the cases we recommend to all engaged in logging operations a careful consideration of the conditions of the country and a shaping of their winter operations accordingly ; therefore.

Resolved, That in view of the fact that under the impetus of excessive log cutting, the lumber supply of the northwest has for the past year or two been in excess of a healthy demand for consumption, inducing a partial stagnation in the lumber business of the country ; and in vinw of the fact that the probable supply of old logs left over the coming winter will be abnormally large, we recommend to all manufacturers of lumber in the pine-producing regions such conservatism in their endeavors during the coming winter as will tend to restrict the tendency toward an over supply of logs during the year 1884.

Resolved, That only in such conservatism can we hope for a profitable return for investment of labor and capital, either to log producer, lumber manufacturer, or lumber dealer.

Resolved, That such curtailment can be accomplished only the individual effort and good judgment of such manufacturer, irrespective of what his neighbor may do, trusting to the good sehse of the lumbermen as a body to accomplish a result which can only tend to the best interest of all engaged in the trade.

Resolved, That there is no more standing timber in the northwest than the future demands of the country will require, and it is as well for the interest of the consumer as producer to cut only such quantities as the yearly ability of the country to consume may demand. It is, therefore, a matter of public policy as well as a matter of self interest to timber-owners to consider their interests in the future while providing a sufficient but not excessive log supply for present consumption.

Spruce In England.

The *Timber Trades Journal* of Sept. 29, says: Spruce went cheap ; the cargo ex Crane seemed to be the most attractive, and several lots of regulars were secured by one firm, who evidently was satisfied he had a bargain at £10 10s. The planks at £12 15s. and £13 were also cheap enough for anything, and with any turn in the market it would not surprise us to see similar goods realizing a few months hence a coupie of pounds a standard morc. The 2nd quality planks also went cheap at £8 10s. Unsorted spruce seemed to average about £7 for regulars, but even at this were very low considering the moderate stocks. Some odd lots went cheaper, but anyway buyers had no cause to complain.

The lowest prices the 1st quality, ex Ellida, from Quebec, fetched, we make no comment on, as they speak for themselves, and merely observe that with Quebec goods, as with those from some of the favorite Baltic ports, buyers cannot always dispense with an inspection.

HOW TO PRESERVE BELTS.

Belting is a very heavy item of expense to every mill man, as it is indeed to every manufacturer using machinery for the prosecution of his industry, and anything which will tend to reduce such expenditure is worthy of presentation for their benefit. An experinced engineer says he has made a belt last him ten years by each Saturday evening turning the inner side out, washing it well with warm water and soda, scraping and oiling it, and then going over the same operation Monday morning before starting the machinery. By doing this and keeping his pulleys clean he finds that they will run at full speed with five pounds of steam when the belts are on loose pulleys, while a larger engine alongside, to which no such attention is given, cannot run with less than thirty pounds under like circumstances,—*Lumberman's Gazette.*

EVERY day reports from the south indicate that the ownership of pine lands there is being gradually contracted to few holders.

THE *Lumberman's Gazette* says :—Cedar operations will not be heavy this winter as the demand for posts and poles does not warrant an extensive output. One Bay City dealer who last winter got out 900,000 pieces will not get out more than 200,000 this. The prospects for the cedar trade are not good.

A HOODED circular saw guard has been invented and patented by Mr. Leonhard Hofmann, of Cincinuati, Ohio, which is adjustable to any height above the saw table to allow for the working of any thicikness of lumber. The adjustment may be made instantly, and the guard is held rigidly in place at any elevation desired. It is designed to prevent accidents by circular saws.

WHAT right have the parties who are daily making a practice of appropriating logs and cedar, found floating in the bay, to their own use and benefit ? If a man can so claim property thus found, what protection is there against his claiming your wife or your wood-pile if he finds them on the streets. Until I am satisfied on this point, I shall in the interest of home comforts, keep my wife in and chain the dog to the wood-pile.

THE PRAIRIE PROVINCE.

WINNIPEG, Man., Oct. 10.—The first real snowstorm of the season occurred to-day. The ground is covered, but it is so soft that it will undoubtedly disappear and be followed by the usual Indian summer.

R. B. Angus, Vice-President of the Canadian Pacific Railway, General Manager Van Horne, and Superintendent Egan reached Calgary this evening after a thirty-six hour run from Winnipeg.

Rev. Dr. Grant, Principal of Queen's College, Kingston, who has just returned with Sandford Fleming from a trip through the Rock river route of the Canadian Pacific, reports Major Rogers, in charge of the Rocky Mountain survey, having successfully achieved a triumph for a direct line. There are three distinct passes, as follows:—In the Rockies proper, Kicking Horse ; in the Selkirk range, Rogers' pass, and in the gold or Columbia range, Eagle pass. This virtually settles a long-disputed question, and gives the Canadian Pacific the shortest of all trans-continental railways. From Winnipeg to Port Moody on the Pacific is only about one thousand four hundred and eighty miles, whereas from Portland to St. Paul is one thousand nine hundred and eleven miles. Another interesting fact is that it will present the most striking and picturesque scenery of all trans-continental railways. The mountains on Bow river, on Kicking Horse, and in the Selkirks are singularly grand and beautiful. Principal Grant has pierced the Rockies now by four distinct passes, and knows whereof he speaks.

MONTREAL AXE WORKS

MOCOCK & SON

St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

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J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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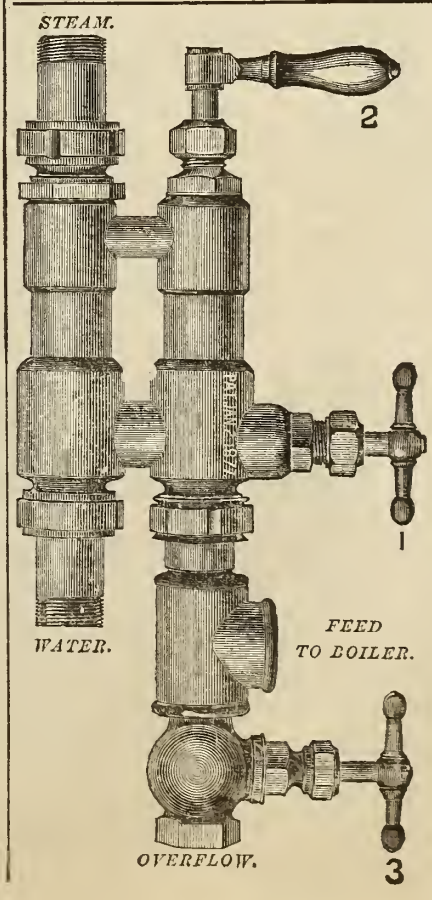

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The Best Feed known for Stationery, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED !

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

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Manufacturers of Inspirators, Fjectors, and General Jet Apparatus.

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AMERICAN SAWS: We represent Four of the Best American Saw Factories

☞SAVE YOUR TIMBER
By using THIN Saws.

McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute, on 6 to 10-inch feed.

They use Steam Feed

THE BROOKE BIT-TOOTH SAW

No. 1 TOOTH.

With this Saw you have either a Bit Tooth Saw or ordinary Inserted Tooth Saw, with teeth two-and-a-half inches long, both fit same socket and are interchangeable in a few minutes. These Bits require no gumming, and very little filing; are so firmly held that they will stand all necessary swaging, and can be worn down to dotted line shown in cut; they rest on lugs, saving the strain on the rim of the saw. For these reasons they will cut more and better timber at less cost than any other tooth. EXTRA BITS (per 100) No. 1. $9; No. 2,$8.—(per 1000), No. 1, $80, No. 2. $70.

Two sets No. 1 Bits have cut 500 m. feet pine, in 60-inch saw, running 800 revolutions per minute, on 6-inch feed. E. E. PARSONS, Arnprior.

VIZ.

AMERICAN SAW Co.

Emerson, Smith & Co.

R. HOE & Co.

Hubbard, Bakewell & Co.

Inserted Tooth, BIT TOOTH,

AND

SPECIALLY THIN SOLID SAWS

We run 60-inch to 72-inch Solid Saws, as thin at center as 10 guage at rim—saving, over a 7 guage saw—1000 feet of lumber in every 25,000 cut.

McLAUGHLIN BROS., Arnprior, run two 66-in. Hoe Saws, on 6 to 10-in. feed, 800 revolutions per minute.

☞Write them.

HOE'S PATENT BIT SAWS.

One of the best Bit Saws made, above cut represents usual size tooth, one size larger and smaller made. ☞Send for particulars and prices.

SAVE TIMBER

GROW RICH

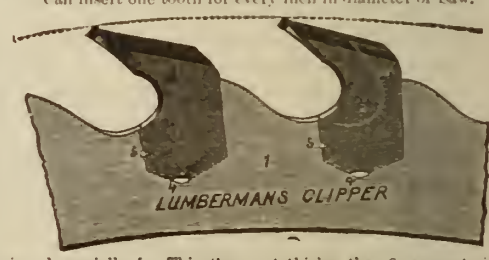
EMERSON'S EXTRA THIN SOLID SAWS

Having special facilities for the manufacture of extra thin saws for board mills, we are prepared to receive orders for Circular Saws as follows:—54 inches in diameter, as thin as 12 guage at rim and 11 at center, 54 to 56: 11 guage at rim, 10 at center, 66 to 72; 10 at rim, 9 at centre. Our unparelleled success with thin saws during past few years has induced us to recommend them to our customers. Our superior facilities are:—1st, Evenness of Temper; 2nd, Perfect Accuracy in Thickness, Saw balances perfectly; 3rd, Properly Hammered, to have equal strain in all its parts and at same time run true. This department is under the special supervision of J. E. Emerson, who has had 30 years experience and is without doubt the most successful circular saw maker in the world.

☞NO EXTRA PRICE FOR THIN SAWS.☜

EMERSON'S LUMBERMAN'S CLIPPER SAW

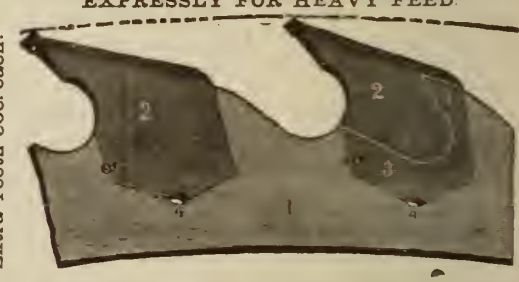
Can insert one tooth for every inch in diameter of Saw.

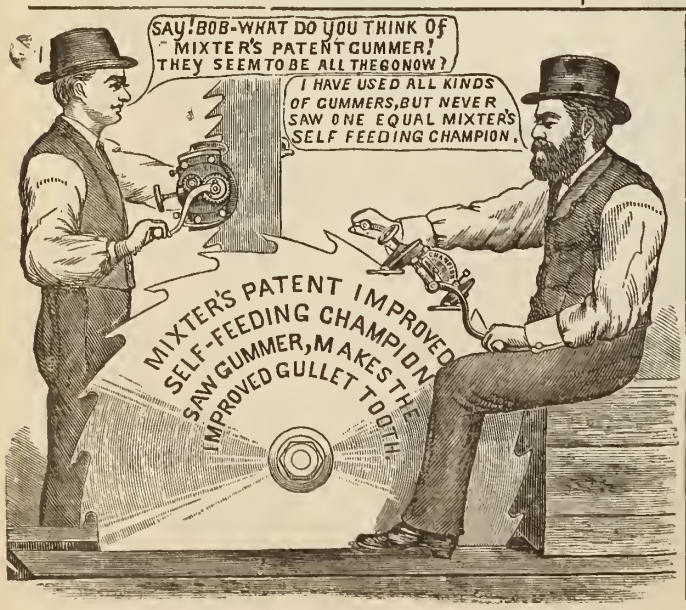


Designed specially for Thin Saws not thicker than 6 gauge at rim, or thinner than 15 guage at rim.

The CLIPPER FLANGE SAW

EXPRESSLY FOR HEAVY FEED





Alligator Jaw Wrenches

5 sizes, grip from ½ to 3 inches, Iron. Solid Steel Jaw. Price 50c. to $5.50.

Cut represents No. 1. Larger sizes have Solid Handles.

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Saw Mill Furnishings

SAW GUMMERS:—Stone's Original, large and smal size Mixter's Self-feeding Champion; Emery Wheels and Stands

SAW SWAGES:—Hoe's, Emerson's, Mixter's, and American Saw Co.; from $1.50 to $6.00.

SIDE FILES, BELT STUDS, Detachable Belt Fastners.

JARECKI'S PATENT SCREW, PLATE, and PIPE CUTTER, ⅛ inch to 2 inches, $28.00; smaller ranges in proportion

Band Saws, Scroll Saws, Rainbow Saws for felling trees, American Shingle Saws, Lace Cutters. Cant Hooks. Flue Scrapers, Leather, Cotton and Rubber Belting.

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Ewart's Detachable Chain For Log Jacks, Refuse Carriers, Sawdust Carriers, all sizes. Live Rolls, Tranfers, Slow Speed Driving Belts, Tie Loaders, Slash Tables, Trimmers, Lumber Sorters, Shingle Block Elevators, and many uses about a saw mill.

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THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 3. PETERBOROUGH, ONT., NOVEMBER 1, 1883. NO. 21.

R. H. RANGER & Co., at East Wilton, Me., have a panel factory, at which they cut basswood panels panels from the circumference of the log, as it is done in the establisment at Saginaw. The log is first steamed, and comes out of the machine a board, flat ribbon, which is then sawed into the sizes desired, and used mostly for sleighs and carriages. This firm has a large European trade.

THE *Northwestean Lumberman* says :—The long-sighted New York lumber dealers have had a splendid oportunity to make a small fortune in lath. Aug. 8, lath sold in that city at $2.20, and'last advices placed current prices at $3.75, with some sales at $4, and there are indications that the top is not reached yet. An advance of 70 per cent. in two months may be called a good one, looking at it from the dealers side of the question.

THE Thunder Bay Sash & Door Monufacturing Company, at Port Arthur, Ont., on the north shore of Lake Superior, haf a capital of $30,000. The intention is to erect a three-story frame building 44x80 feet on the ground, an engine house, dry kiln, storehouse and office. The company is to be represented at Winnipeg, so as to make sales throughout the Canadian Northwest, The object is to capture some of the trade now enjoyed by the Americans.

THE *Northwestern Lumberman* says :—Timber land in Maine is valuable, both for forest products and agriculture. George H. Fogg, of Eddington, started to make a farm out of 100 acres of forest land, which he bought in the town of Kingman for $5 an acre. He cut 230, 000 last blocks and the frames for two 500-ton vessels off the lot, and having cleared 40 acres, he this year cut 75 tons of hay and raisd 15,000 bushels of potatoes, and has 60 acres of timber left. He must have realized over $2,000 on his 100 acre lot already, and more to hear from. It would bother a prairie farmer to do as much.

THE Parry Sound *North Star* says :—The case of Ferris *vs.* the Parry Sound Lumber Company, for damages for flooded land, was tried at Barrie this week and resulted in the jury giving a verdict of $100 damages in favor of Ferris. The amount sued for is $1000. A similar case brought against the Muskoko Boom Company by Captain Harston, of Ilfracombe, for "drowning" 25 acres of land, was also tried at the same court. The damages claimed in this case was also $1,000 and the jury awarded damages to the amount of $50. These cases show that juries cannot be persuaded to award "fancy" damages in such cases and proves that in advising settlers to settle their grievances with the lumbermen without a recourse to the courts we were in the right.

THE LATE MR. JAMES LITTLE.

In its remarks on the death of the late lamented Mr. Little, the Montreal *Herald* says:—

In 1830 he was married at St. Catherines, and moved with his wife to a place on the Grand River, now called Caledonia. The whole section was, at this period, a wilderness inhabited by the Six Nation Indians, and Mr. Little passed months at a time without seeing the face of a white woman. He engaged in lumbering, and ultimately his business extended over nearly the whole peninsula lying between Lakes Erie and Ontario. He carried on an active business for nearly thirty years. He came to Montreal at the age of 70 years, and at once became one of the most persistent advocates of forest protection, his personal knowledge of the lumber business and the rapidly decreasing area of forest territory enabling him more rapidly to draw attention to the facts. He was in a great measure successful, as he lived to receive an acknowledgment of the soundness of his views by a special vote of thanks from the American Forestry Congress, and by having his named placed as honorable president of the Forestry Association of this Province. No one to read the able articles that have appeared in the Columns of the *Herald*, and other papers could have imagined that these were the productions of a gentleman who had already passed the allotted seventy years, yet his death now at the age of 80 shows that he had passed this period, and recognizing as we do the great importance of forest conservation to the welfare of the country, can truly say that few men have done so much for the country's good, having their whole life's vigor to assist them. He was the first person in Canada to send lumber to the United States markets, Albany being reached by night and day coaches from Buffalo in a week's time.

SOME MAINE WORKINGS IN WOOD.

The *Mining and Industrial Journal*, of Bangor, Me., says : There are 2,000 clothes-pin factories in this country. Were it not for our forests of white birch, beech and other kinds of hardwoods, the world's washday would be dark indeed, as nearly every clothes-pin made in the world is made in the United States. There are some 200 factories in Ohio and Pennsylvania. Maine has several. One of these is at Strong, a thriving town under the shadow of Mount Blue. This mill is owned and operated by J. W. Porter & Son, who also turn out large quantities of croquets sets) base-ball bats, ten pins, staves, excelsior, and wooden articles of various descriptions too numerous to mention. The clothes-pin is made of white birch, which is the best of all hardwoods in the lath, but mnst be worked green or it roughs up. Two machines make the clothes-pin ; one turns it and another saws the slot. Then 10 bushels of pines are dumped together into a large drum, which is made to revolve rapidly ; in this way the pins are rubbed against each other and polish themselves. There is a machine which turns out a complete clothes-pin, doing both the sawing and slotting, but this pin is straight and its prongs have no spring to them ; while the prongs of the pin made by the two machines are concaved, and the pin is not so easily split. Croquet sets are turned out here with astonishing rapidity, by means of a variety of lathes. They are made of all kinds of hardwood. A maple bolt is chopped into round balls at the rate of 2,000 an hour, by knives that shape the opposite hemispheres of two balls at once. One clip makes a ball—that is, half of one ball and half of another. By means of patterns and travelling knives, mallet-heads and handles are made in a variety of shapes. The fashionable mallet the past season had a head twice as long as the old-fashioned mallet and a handle about half as long. The mallet-heads are subjected to the same shaking up and self-polishing in the drum that smooths the clothes-pins. The sets are decorated by machinery, the states, mallets and balls being placed in a painter's lathe and one revolution make a strip. One may invest 50 cents, $5 or more in croquet. The demand has never been so great as during the sast summer. A single New York firm ordered 10,000 sets. As to base-ball bats, the dealers fairly begged for them. The supply failed, for some reason or other, and they could get their orders filled nowhere. Ash and willow make the favorite bats. Willow timber is not easily had, however, as the manufacturers of artificial legs manage to secure all the supply. There's nothing equal to willow for a wooden leg.

PANURGE ON FORESTRY.

The following letter appears in the *Mail*.—

SIR,—Looking into Rabelais a day or two ago I lighted on an ancient illustration of the waste deplored by Mr. Phipps. Pantagruel appoints Panurge to the lordship of Salmigondia, upon which the latter dissipates the revenue of three years in a fortnight. One of the means by which this was accomplished is given as "felling timber burning the great logs for the sale of the ashes." Those who have lived forty years in Canada have been amply familiar with this process. But Panurge had a good word to say for his extravagance, which I fear poor Canadians had not wit enough to imagine. He says: The virue of fortitude appears therein, by the cutting down and overthrowing of the great trees, like a second Milo, making havoc of the dark forests, which did serve only to furnish dens, caves, and shelter to wolves, wild boars, and foxes ; and afford receptacles, withdrawing corners and refuges to robbers, thieves, and murderers ; lurking holes and skulking places for cut-throat assassinators ; secret obscure shops for coiners of false money, and safe retreats for heretics; laying woods even and level with the plain champaign fields and pleasant healthy ground, at the sound of the hautboys and bagpipes playing reeks with "high and Stately timber" etc., etc. At any rate it would seem that Fenchmen three hundred and fifty years ago were no wiser than Canadians, and that the acute and witty scholar had eyes for their folly and many words for its reprehension.

Yours, &c.,

JOHN CARRY.

Port Perry, Oct. 13.

TIMBER AND HOUSES IN SKYE.

Throughout the isles timber is a rare and precious article, most frequently the gift of ocean. The man who secures a good log of driftwood has obtained a prize worth having. It may have been a brave old tree, tempest-torn from its home in some distant forest, carried to the sea by rushing torrents, and perchange tossed by the waves and wafted to and fro by many a current, ere it drifted to its rest on these far isles. Or it may be the masts and spars, or perchance the cargo of some wrecked vessel—whatever its story it is treasure trove, and most deeply valued. Though encrusted with barnacles or riddled by pholades it can all be turned to good account ; the smallest piece will make a stool or a settle, or a box or a part of a door ; while large timbers become rafters—precious heirlooms, for a young couple cannot wed till they have accumulated enough rafters to support their thatch, and should they have occasion to "flit," the only part of their bothy that commands any pecuniary compensation is the roof, not the work only, but also the heavy thatch saturated with thick greasy peat-reek, (in other words with a thick coating of soot). This, when broken up, forms a valuable manure for the unfertile crofts.—*Temple Bar.*

Michoacan Forests.

The state of Michoacan, which Humboldt pronounced the paradise of Mexico, lies in the southwestern part of that great republic, and borders on the Pacific ocean. Besides being a country of extraordinary richness in soil and minerals, it has a vast abundauce of valuable woods. The hills and mountains are everywhere clothed with luxuriant forests, in which grow a great variety of valuable woods, such as ebony, mahogany, etc. These forest growths are said to be more abundant in Michoacan than anywhere else in Mexico, and it is predicted that as soon as the present progressive policy of that country causes Michoacan to be peuetrated by railroads, its trade in valuable woods will become immense.—*Northwestern Lumberman.*

ON Oct. 4, 8,500 bushels of Oregon wheat arrived at Duluth over the Northern Pacific railway, the first shipment of the kind, to Duluth, ever made by way of the newly completed route. This receipt of wheat marks a new area in northwestern traffic aud development.

THE LUMBER INTERESTS OF CHICAGO.

On the southwestern border of Chicago is another city whose buildings are the blackened piles of lumber, and whose busiest highways are the passages between, just large enough to afford entrance for a wagon. Through this district flows the sluggish water of the south branch of the Chicago River, its current changing direction with the wind, and its odors unvarying, except to grow a little more intolerable when some huge propeller is fast in the mud, and her own screw, aided by the tugs pulling at her, stirs up the oozy bottom.

Extending into the yards on either hand are long slips from which rise the graceful spars of the lumber schooners, or the stumpy and blackened masts of the barges. Some of these carry nearly a million feet of lumber. The "lumber shovers" who unload them wear a leather apron extending from the belt to the knees, and leather guards to protect the palms of their hands. During the cold raw weather of early spring these men can be seen at work stripped to the waists, regardless of the freezing rain and the brisk lake winds which make such sad havoc with weak lungs.

Almost as far as the eye can distinguish objects through the smoky atmosphere the vast expanse is roofed with the sloping tops of the lumber piles. Here and there rises a planing-mill or sash factory, or more conspicuously the huge grain elevators with their iron roofs and slate-covered sides. Tracks and sidings admit to the heart of the lumber district the locomotive with its string of cars of almost every road in the country, coming to be loaded with the rough lumber, packing boxes, or the finer manufactures of doors, stair rails, and the like. The trains make quite a study of color in the otherwise dingy prospect. Even the cars of the same lines are of different shades from varied exposure to the weather. The air resounds with the hum of the planing-mills, the snorting of the busy switch engines, the jolting of the wagons on the corduroy roads, the rattling of tackles and the whistling of tugs on the river. Scores of chimneys and stacks fill the air with smoke, and the breeze carries with it the finer dust from the saw mills, which finds snug lodgment in the eyes of the visitor, whose effort for relief bedaub his cheeks with the damp soot deposited there.

Scattered about in other localities, generally along the river, are other yards, singly or in groups, aggregating as large an area as that of the "lumber district" described. Even at the mouth of the river, on artificial ground, the mills and lumber piles extend eastward half a mile or more beyond the site of the old lighthouse and Fort Dearborn. The stock of lumber on hand varies from four to seven hundred million feet of sawed stuff and timber, one to three hundred million shingles, forty to seventy million laths, with pickets, cedar posts, etc., in proportion.

The shipments sometimes reach two hundred million feet of lumber and one hundred and fifty million shingles in a single month. The local trade amounts annually to over five hundred million feet.

The town of South Chicago, at the mouth of the Calumet River, twelve miles south, has extensive yards, and, according to the interested parties, bids fair to rival the present city in the future. Many of the citizens of Chicago wish the lumber trade was transferred entirely to the Calumet, for they look with apprehension upon the acres of dry lumber, and fear a repetition of the calamity of 1871. A fire getting good headway in this locality, if fanned by the strong southwest winds prevalent in the summer and fall, could badly fail to destroy the city as completely as before, despite the efforts of what is called the most efficient fire department in the world.

The region which produces this enormous quantity of lumber extends along the eastern shore of Lake Michigan and half the length of the western side. Reaching far into the interior of the state are streams which bring down the logs rafted together to the saw mills at the river mouths. These lumber towns along the shore are wooden to the last degree. Many are built upon piles driven into the sandy marshes, the buildings all frame, and even the roads made of sawdust, into which the foot sinks as though in dry sand. Their well water is frequently as yellow as saffron from the decaying wood through which it comes. It seems almost a miracle that any of the inhabitants should escape if one of the forest fires which occasionally sweep through the lumber regions attacked this town. No provision is being made to perpetuate the forests, but they are being cut down right and left, making it only a question of time when the white pine timber will be as scarce as rosewood. As a gentleman connected with the lumber interest remarked, "We are doing nothing for posterity except to decree that they shall not build wooden houses."

The lumber is brought to the Chicago market chiefly by schooners, propellers, and barges, the latter being towed two or three at a time by powerful tugs. The receipts of lumber by rail, except from the south, are comparatively light, although the Chicagoans think it would make a comfortable business for what they facetiously call the "surburban towns," viz., Milwaukee, St. Paul and St. Louis. The immensity of the lumber business of Chicago can not be realized except by taking a drive through the lumber district, and spending an afternoon in the rooms of the Lumberman's Exchange, poring over the statistics compiled by the secretary. There are two hundred and twenty firms engaged either as brokers, manufacturers, or dealers in lumber. Last year one firm alone handled on hundred and twenty-five million feet, averaging in value about $18 a thousand.

Besides this trade in pine the hardwood lines are in increasing demand. The costly hard woods, domestic and imported, and the cheaper hard pine from Mississippi, form no inconsiderable item in the year's receipts. During the last year the receipts of lumber at Chicago made a grand total of 2,676,757,842 feet, and 1,215,455,494 shingles. Of this, three hundred million feet were of hardwood. The long-leaf yellow pine, heavy almost as mahogany, and so pitchy that a sliver of it will burn like a taper, is rapidly growing in favor for interior work. Good selected stock has a beautifully figured grain, and when darkened a little by time is surpassed in effect by but few of the more costly hard woods. The shipping trade in lumber from Chicago extends northwest, west, and south to the limits of the country, not always stopping there. Some of the lumber towns of Michigan are active competitors for the trade with the Eastern States; but, nevertheless, the city of railroads manages to forward a goodly amount into their markets.

Chicago, being in the centre of a vast system of water and rail transportation lines, is destined to become a larger dealer in lumber every year, although now the largest market for forest products in the world. The millionaire in the metropolis and the section hand on one of the new western railroads both buy the material for their homes from her yards. The boards for the farmers' fences and the ties on the road-bed of the railroad which carried him to his western home pass through the hands of the Chicago lumbermen. The forests of Michigan are still enormous, and the undeveloped West demands their wood. The trade is guaranteed for years to come, and fortunes await those who can skillfully conduct it.—*James J. Wait in Harper's Weekly.*

AUTUMNAL RUMBLINGS.

The *Timber Trades Journal* of Oct. 6, says: A fortnight ago our Liverpool authority gave the following uncomfortable account of the state of the timber trade in that port:—

"The importation of all kinds of wood goods continues to be far beyond the wants of the trade, and until there is a very marked improvement in the general business of this district, no relief from the present state of depression need be looked for, unless shippers can stop the glut of supplies which are at present being put upon the market."

Since then about eighty ships with wood goods have arrived there, and the same tone was apparent in the report of last week, but a little more hopeful, though on what the hope was grounded was not very apparent. We find the following from the same hand:—

"The importation of North American goods, both timber and deals, continues to be in excess of the requirements of the trade, and therefore, there is no improvement in prices; at the same time, these are at such a low ebb that there is a probability of shipments being greatly curtailed."

Well, that may be accounted a reasonable source of hope, on a small scale. But as long as there is a ship to load, and the ports are open, we are not likely to have to record the novelty of her coming away in ballast. It is added, however, that

"the last advices from St. John, N. B., report that several of the city mills are shut down, as manufacturers of spruce deals see that it is impossible to make sales at a profitable figure until the English markets show some considerable advance."

This shutting down of the mills is heard of every season, but we have never known it prevent our getting a very plentiful supply in the end. Sometimes it is a drought that stops them, another time great floods have broken up the rafts and scattered their contents over the intervening lands, where they remain high and dry, far away from the navigable channel through which they were bound to their destination. Now, having *glutted* our market (as they find out), some of the mill owners indignantly shut down their mills, we may presume because only such shabby prices are to be obtained in our chief emporiums. But we have been given to understand that there is always a brisk demand from the States, at the lower ports, which might be expected to keep them going when trade is slack here. At all events, neither in Liverpool nor in London is the reported closing of any number of spruce mills likely to add a doit to the prices obtainable at the public sales in the month of October. Natural causes are now at hand which will stop shipments altogether at most of the ports, both in America and in Europe, and on the termination only of the season—be it early or late—will the trade look for an interruption to the regular routine of importation at this period of the year.

Talking of the approach of winter, it may be permitted to remark that in Europe there are reasons for anticipating that it will be a severe one, and not unlikely to set in early. It is worthy of notice that we appear to have been indebted for the very fine summer we have had chiefly to the southern winds, which have prevailed, with short intervals of change, since the beginning of April. From southeast to south and west has been the rule, northerly and easterly blasts have been of short continuance, and just as they began to be annoying and to effect vegetation the wind has again gone to its old quarters, and however rough it might be, it was almost always genial, and with all the sunshine and rain that was necessary, and lattorly—that is, in September—whole weeks of calm, sunny days, though the month began and ended with a storm. In fact, we have had in this country a good old-fashioned English summer, in which each succeeding month brought with it the characteristics which tradition had of old assigned to it.

It used to be calculated that southwest winds prevailed for three-fourths of year in England, but of late this rule has not held good, and not above three years ago the learned and scientific occupied themselves in putting forward theories, to show that the climate of these regions was gradually changing for the worse; and even astronomy was almost turned inside out to account for it. Looking, therefore, to the future of the year, as likely to be consistent with that part of it which has gone before, we may expect that the east and north winds will get their turn with a long innings as the days shorten, already we have a taste of them, and that Boreas will re-assert his reign as Christmas approaches, and when he rules at that period he lets us all know it. There is a compensating balance in the seasons as well as in the solar system itself, but its laws are less perfectly known. Rain, wind, and sunshine, heat and cold, are reduced to an average by meteorologists, and, though the years may vary, they find their level in a series and come around again to the happy medium, in which flowers, fruits, and harvest, follow each other in rapid succession "and scatter plenty through a smiling land," after which we may expect that the rigours of winter will be equally conspicuous, and if it should be an early one, so as to close the Baltic in November, the trade would then have substantial grounds for believing that the import season could not be much further prolonged. That shipments will continue to be made for this country, whether we need them or not, may be pretty plainly seen in the intimation of our Swedish correspondent's last letter. He states, under date of September 22nd, that

"it is not likely any large quantity of goods will be sent from Norrland to London, or similar centres, on consignment this fall."

He then warns us that

"if tonnage can be had at reasonable rates, consignments to a limited extent will be made from Finland, not only to London, but to one or two continental ports."

This is not suggestive of a limited extent, and probably some other British ports may be favored with these contemplated consignments, though the timber merchants of the neighborhood may be by no means expecting such preference. At the beginning of the season the trade of this country was assured that consignments to British markets were not to be thought of, as it was evident they were not in a condition to bear them. Prices have given way on this side since then, say 10 per cent. at least, and now consignments are openly talked of as imminent, to a limited extent, which seems to have no other limitation than that of the tonnage to be got hold of before the final arrest of the proceedings by the advance of General Frosty-fist to the rescue. That is all the security merchants on this side have to protect them from an excessive fall importation. But there is a part of our correspondent's letter which seems to foreshadow a change for the better, though it be more remote than he thinks. At any rate, he speaks out, and with an emphasis which indicates that he is very much in earnest. He describes to us the state of the forests and the results of the measures taken for regulating the cutting, and then he adds

"In spite of the present depression in the trade, it is my firm belief that we are on the eve of a substantial rise in the value of growing timber, and especially of redwood."

It is not easy to see how, while production is going on at such an enormous rate in Sweden and Finland, any check can be interposed that will raise prices here; but if shippers have to pay more for the growing wood they will hardly continue to ship it on speculation with the probability of a loss on every cargo.

We fear that for this season at least the prediction will not benefit the trade of this country. There appears to be already so large an accumulation of stock in the hands of the mill-owners that they may be considered almost independent of growing timber for the present, and any attempt to increase its price might throw many lumberers out of employment without affecting the free on-board market, till the stocks now preparing for shipment began to be seriously diminished by the demands of another season.

Teakwood.

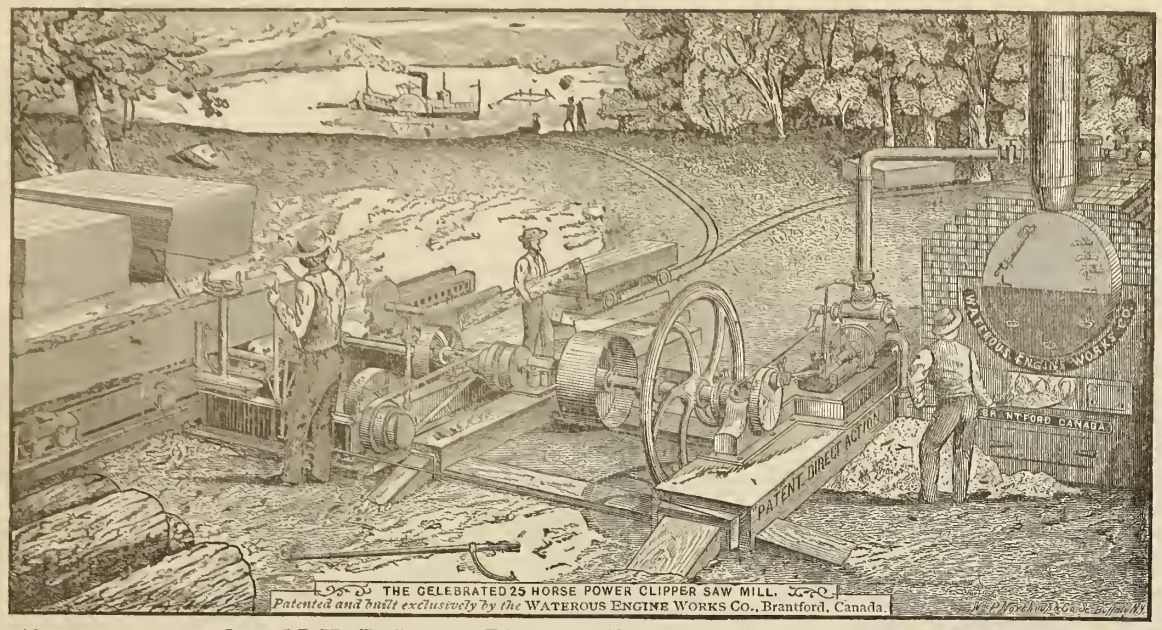
I understand, says a writer in the *Garden*, that some of our enterprising hot-house builders are introducing this wood into horticultural buildings, and it is expected it will supersede pine to a considerable extent. It is light, strong, and durable, and not difficult to work. Teak baskets for orchids are now common, and gardeners know how much more lasting they are than those of hazel and other common woods. Lightness and elegance of structure are important considerations in hot-houses in more ways than one, and in this respect teak has the decided advantage, for it enables the builder to dispense with heavy rafters and beams, and is not much less durable than iron, to which it is preferable in other respects.

An Ancient Forest.

The *Timber Trades Journal* of Oct 6th, says: At a meeting of the Tees Conservancy Commissioners, on Monday last, Mr. Fallows stated that 134 heavy trees, varying from 10 ft. to 40 in length had been dredged from the river. They were, doubtless, part of the forest which existed in the locality in remote times.

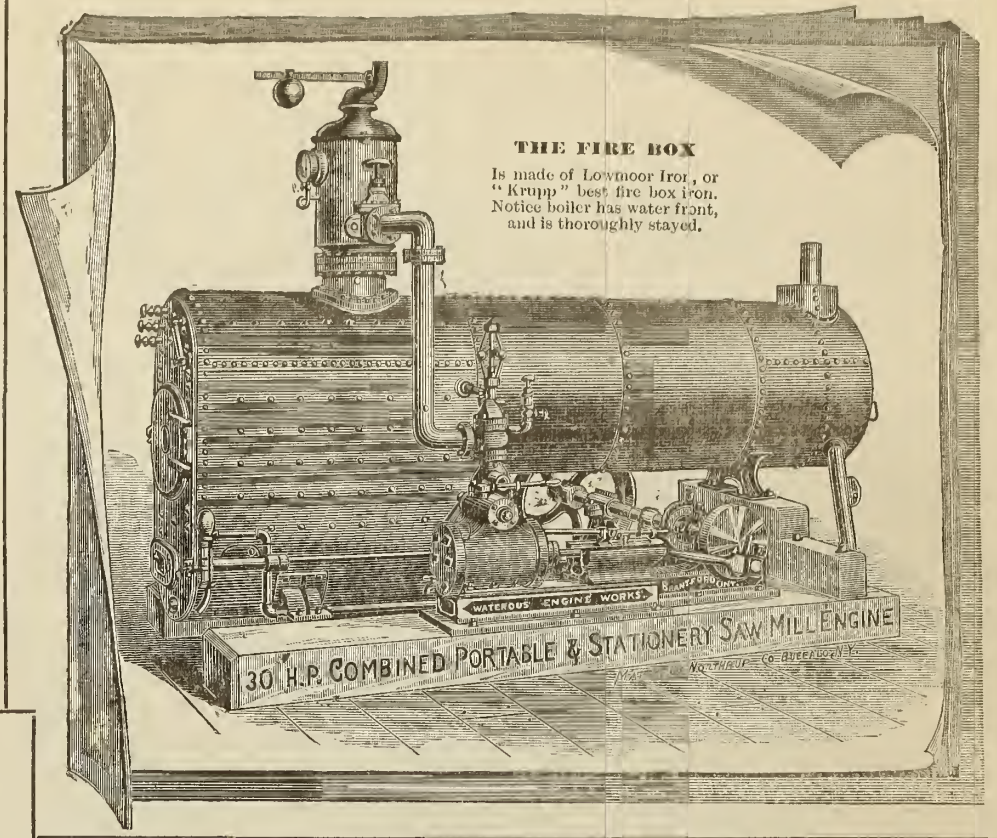
Semi-Portable and Portable Direct Action and Belted Saw Mills!

TEN DIFFERENT SIZES.



Above cut represents **Our 25 H. P. Patent Direct Action Mill** which we guarantee to cut 8,000 to 12,000 feet of lumber per day of ten hours, and to be the most efficient, economical and durable mill built in America, and will saw lumber cheaper per thousand than heavy large size belted or gang mills. For over a quarter of a century the leading pioneer mill of Canadian settlers. ☞Specially constructed for hard work.

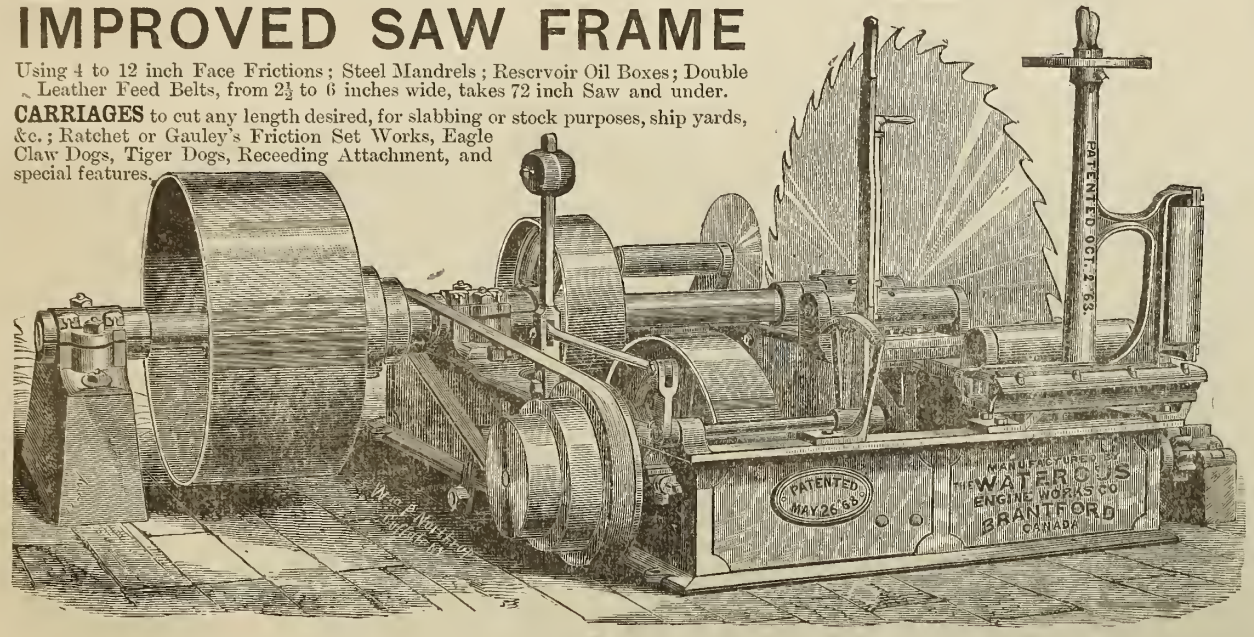
☞This Cut represents the Engine furnished with Nos. 8, 12, 16 and 18 Saw Mills.



IMPROVED SAW FRAME

Using 4 to 12 inch Face Frictions; Steel Mandrels; Reservoir Oil Boxes; Double Leather Feed Belts, from 2½ to 6 inches wide, takes 72 inch Saw and under.

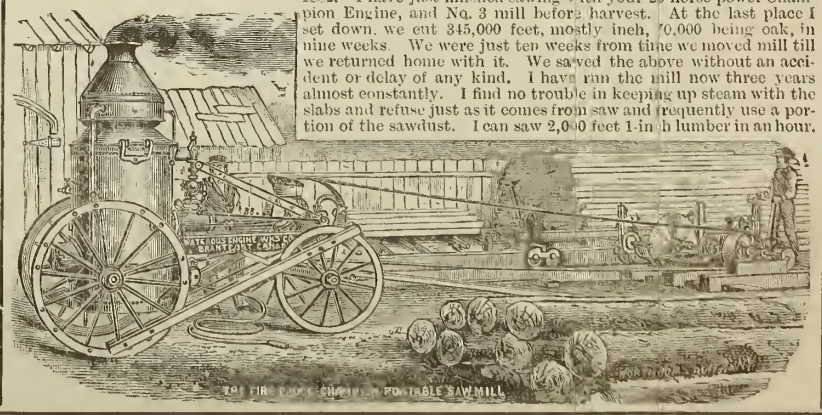
CARRIAGES to cut any length desired, for slabbing or stock purposes, ship yards, &c.; Ratchet or Gauley's Friction Set Works, Eagle Claw Dogs, Tiger Dogs, Receeding Attachment, and special features.



Champion Portable Saw Mills

12, 16, and 20 H. P.

GEORGE BOOK writes as follows:—"ST. ANNS, ONT., July 27th, 1882.—I have just finished sawing with your 20-horse power Champion Engine, and No. 3 mill before harvest. At the last place I set down, we cut 345,000 feet, mostly inch, 70,000 being oak, in nine weeks. We were just ten weeks from time we moved mill till we returned home with it. We sawed the above without an accident or delay of any kind. I have run the mill now three years almost constantly. I find no trouble in keeping up steam with the slabs and refuse just as it comes from saw and frequently use a portion of the sawdust. I can saw 2,000 feet 1-inch lumber in an hour.



The following are a few who have bought these mills:—

Canada Pacific R. R. Co.
G. B. Hall & Co., Que. (2)
Dominion Land & C. Co. Sherbrooke, Que. (2)
Sorel R. R. Co., Que. (2)
Cochrane Ranche Co. Bow River, N.W.T.
Nor.-West Milling and Mining Co., Bow River, N.W.T.
Toronto and Nor.-West Colonization Co., Near Brandon.
Morton Dairy & Farming Co., Turtle Mountain.
Allan Grant, Ottawa.
Geo. Perley, Ottawa.
Michipicoten Native Copper Co.,
W. W. Stewart, Montreal

A. & P. White, Pembroke, have one of these 30 H. P. mills at Deux Rivieres, C. P. R. R.
G. C. V. Hall, Quebec, has one of these 30 H. P. mills at St. Agnes, Quebec.
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Send for New Price List and Illustrated Circular, of special interest to saw-mill men. ☞Mention this Paper.

THE FORESTS AND THEIR MANAGEMENT.

We take the following from Mr. R. W. Phipps' report to the Ontario Government:

THE BRITISH ISLES.

There are many forests, both Crown and private, in the British Islands, concerning which, as they appear to be managed on different systems, I shall merely state such points as seem to have some bearing on possible operations in Canada, or may show the progress made in late years in planting and foresting operations.

In the New Forest, Hampshire, containing 91,000 acres, much has been planted with Scotch fir and larch in 1853, and with oak in 1857. What is noticeable is that the first, planted as nurses, are planted here so much before the others (both are elsewhere frequently planted at once). It is done to establish the nurses, and give shelter from the cutting winds prevalent here. They transplant here from the first nursery to another—the last one near the ultimate destination of the trees.

The Dean Forest, in Gloucestershire, has 22,000 acres, in all. The commissioner visited twelve plantations here, ranging from 1844 to the present year. Nurses and hardwood are put ont together.

In Scotland, the nurseries of Lawson & Sons, near Edinburgh, are noticed. They contain 270 acres. There were thirty millions of conifierœ seedlings in the beds. The *pinus pinaster* is largely used for planting on light sandy soils near the sea.

Before sowing or forming the nursery bed the land is trenched to fourteen inches, and a crop of potatoes taken off to clean it. In the following spring the seed beds are laid out, and the upper soil carefully prepared to suit the nature of the trees which are to be sown. Most of the coniferæ prefer a light dry soil with a considerable proportion of sand, and this has the advantage that the seedlings are easily shaken out and freed from each other for transplanting. In the case of Scotch fir and larch, the seed is sown in May or June, and left in the seed bed for two seasons. The seedlings are then planted out in lines fourteen inches apart, and three inches between each plant, are left thus for sometimes two years, and then planted out for good. It is thought better, if the frost can be prevented from killing the seedlings, to sow in April, and transplant one year after, or even the same autumn, as soon as the leaf bud is hard. The spruce requires two years in the seed beds, as its growth is slower than that of larch. The *pinus pinaster*, *austriaca*, and *laricio* are sown in May or June, and transplanted the same autumn into rows six inches apart, the plants close together. Hence they are transplanted the following autumn, into rows fourteen inches apart, where they are left one or two years before being planted out. It is considered an object to shorten tap-roots and encourage laterals. (This last idea, it will be noticed, may assist the tree; but not that main object of forest preservation, the connection between the upper and lower strata.)

The Earl of Seafield's woods, in Strathspey, give an instance of the rapidity with which planting is going on in Scotland. There are 60,000 acres, of which half are in timber, yet so young, that the commissioner saw little large wood ready to cut, but plenty of thinnings. The overseer intends gradually to plant the whole, so that, in course of time a thousand acres could be cut annually and a thousand planted out, which could not, it is said, fail to bring in a large revenue, without trenching on the capital of timber. Three lines of Scotch fir the commissioner saw lifted and tied in bundles for planting out. This was done expeditiously by the five-pronged fork, two men digging out the young trees, which are then lifted by women, the earth shaken off, and tied in bundles for planting. This list will give some idea of the progress made on only one estate:—Duthil hill, 700 acres, planted six years; Deshar, 1,100 acres, within seven years; Sluemore, 600 acres, five years; Revock, 700 acres, four years; Bengalupin, 1,200 acres, six years; Advie, 300 acres, one year.

A point here presents itself which, though it seems vague, and not according with Canadian experience, it might to be well to examine and find the meaning of. The Strathspey overseer considers that "in Strathby, at least, the land should be left barren and untouched, after it is cleared of trees, until the natural herbage, whether heather, grass or moss, which existed before the trees grew, recovers; and that if planted before this takes place, failure will result."

It may be remarked that oak is now little planted here, its use for ship-building being much less than formerly; while, even for backing for ironclads it is abandoned in favor of teak, which has not the injurious effect upon the iron produced by the contact of oak. Scotch fir and larch are much planted, and are rapid in natural reproduction. Whenever the natural vegetation has sprung up in places formerly covered with coniferous trees, the seeds germinate. This is then protected by wire fences with great success. In a large tract of self-sown forest in Granton district, enclosed six years ago, the Scotch fir average six feet high, while individual trees run up to ten feet.

Wire fence, tarred, three feet eight inches high, can be constructed for seventeen cents per yard, posts and all, and is much used. After ten years, or when the trees have grown out of harm's way, pasture is sometimes let. Enclosed plantations for this purpose command 2s. 6d. per acre, while ordinary hill side pasture gets but 6d.

The Earl of Mansfield's woods, in Perthshire. These are about ten thousand acres. Planting is going on constantly. There are nine district foresters, and a large staff of woodmen. A large plantation of Douglas pine is mentioned as doing remarkably well. They were planted in pits fifteen feet apart, fifteen inches square, and ten inches deep, with larch and Scotch fir nurses at four feet apart. The pines average twenty-five feet in height. The nurses are being removed. The overseer disagrees with the Strathspey statement as to leaving the land bare, and considers that it is only the insects (the beetle) which hinder the growth of seedlings on land cleared of conifers. He succeeds well by excluding cattle for one year, letting the grass, etc. grow, then burning it when dry, and planting out.

The Duke of Athol's woods, in Perthshire, comprise 10,000 acres, and were commenced in 1728, principally with larch, which has done well in places, but is now undergoing the substitution of Scotch fir which pays better. Oak coppice cut at intervals of twenty years yield $60 per acre.

WOOD-WORKING FACTORIES.

A correspondent of the *Builder and Wood-Worker*, who has evidently "been there," writes: We do not have to draw largely on our imagination for persons who make up the rank and file of men setting up and running planing mill machinery. We just take the men as we find them, and the machinery, and by uniting them together the picture soon becomes a reality, and the mystery of imagination ceases at that moment to be mysterious. But the kaleidoscope does not produce a greater variety of fantistic forms than does the vast number of mills through the country, each showing some different person and different style in the management and care of that particular mill. Each has his own particular way, which shows itself in every nook and corner, and about every piece of machinery that has anything to do with. You go into a place and see everything in a tumble down style, and belts running half off the pulleys on the leader and the other half off on the driven, and boards and pieces of plank nailed up here and there, half worn through by belts they are trying to lead or drive somewhere, the said belts having three or four more lacings in each, and going around the pulleys like a Virginia fence, making it almost like running a gauntlet to get through the mills. Tools lying helter skelter, here and there and, perhaps, on the floor in the shavings; and the first thing you hear from them they go rattling through the suction fan, or the fireman has pulled them out from under the furnaces when cleaning out to start the fire in the morning; and so through the whole arrangement of the mill, everything from top to bottom at loose end.

We do not have to draw largely on our poor ideality to complete this picture. The person having charge, very likely, leaves everything to the care of irresponsible workmen, whose only care seems to be to get through as little work as possible, and get their overalls off ready to jump out of the mill at the first sound of the whistle or bell; the aforesaid man in charge having left sometime before, that he may spend a little time in a favorite grogery and get fortified for the afternoon's performance or, perhaps, get braced up for to-morrow. Such companionship completes the picture drawn and is true to life.

Now take the opposite conditions, and we see belts running perfectly everywhere; everything is free and clear. One lacing in a belt and perhaps, what is infinitely better, the belts are made continuous by lapping and riveting; everything is in its place. If you want a wrench or file or any tool necessary about the mill, all you have to do is to go where they are always kept and you are sure to find the tool you want, and never, or scarcely ever, find a tool in the shavings or rattling through the suction fan, and there never is found little piles of pieces of boards lying around in the way, taking up room that could be used to very much better advantage as a clean place, where you could put some useful thing if you wanted to. I do not ever see this man leaving any responsibility, which he ought to bear, resting on the shoulders of those who are not fit persons to trust it with, and he makes it a rule to see that everything about the mill and machinery is properly attended to. The oiling is looked after, and there is never a hot box because he knows the condition of every box and bearing about the mill. You never can go through the mill and hear a squeak here and another there and another over yonder, as if there was half a dozen wagons going through that had not been greased for the last decade. You always find this man there quite as soon as any of his men are, and has everything ready to go ahead as soon as the machinery starts up, and is there until the mill shuts down, and never has to visit any saloon or grogery on the way home to brace up for any future task or duty.

This is one picture which this kaleidoscope shows us, and we turn it just a little and we see another. It does not necessarily follow that because a man is orderly and keeps everything in its place, that he would be one that understood just how to file a saw, or sharpen a knife or a side-cutter, and keep it in good working shape. Keeping tools in their place and keeping them in good condition to do their work well and easily, are two very different things, although it would seem that a person who was nice and orderly about one thing would be so in others, and would take pride in the work of his hands.

We will go into a mill, however, and look around, and we come to a saw bench and see a saw with one large tooth and one small one, and one long one and a short one, and one filed very fleaming and another almost square; and and looking at some sawn stuff, it looks as if a thousand demons had gone through it with a hurricane. More than as likely as not this abused servant had three or four black spots on it showing how terribly it had been handled.

This is a specimen of the rest of the tools in the mill. A pair of side-cutters on a bench near by confirms the statement. One is filed short and another a long bevel, and the grooving bit of one stands out one eighth of an inch further than the other, and one is filed standing and another the opposite, every individual bit is sharpened at a different bevel. We look for stuff that has come from the mill with tools in this shape and we find the last production and, oh! horrors of horrors, the demons have been here surely and have been recruited. Do we wonder that carpenters complain of the bad work done by planing and matching machines? But there is a relief to this picture, and a little turn of our magic picture maker brings it to us in an instant.

We see a man just stopping his saw, and before he shuts off he takes a piece of broken grindstone, and carefully holding it up to the saw, just brushes it over. Noticing this we ask, "Do you joint a saw every time you take it out to sharpen?" He tells us "No," not always, but as often as once a day he just goes over it to keep the teeth of an even length, which helps to keep the out corners full and makes the saw run enough better to pay for the trouble. When he takes the saw out he holds it up to you, and you see every tooth is so near alike that the eye can not see any difference in their size or shape, and the saw shines like a piece of burnished silver. This draws out the remark that he has not got any black spots on his saw. Pleasantly he tells you there is no need of any if you use the saw right. If you keep a saw round, and the outside corners full, and a good fair set in it, and don't crowd it if it binds in the cut, which it will do sometimes, there is no need of making black spots on a saw. He shows us some of the sawing, and you are surprised that a man can do so nice work, but when he comes to put in another and you hear it make that fine, clean clear cut, so peculiar to a saw in order, that you do not wonder that his sawed stuff looks so nice. He tells us that they have one man to look after the saws and no other man ever has anything to do about filing or setting, which makes the saws all come from the filer, uniform in set and shape of tooth, and if there is hard wood to saw, there is always something ready for the work. We now go on to see the man sharpening the knives of a matching mill, and we see him taking pains that the knife is straight, and he gives it a good bevel so that there will be a good clearance in the cut, so as not to go pounding through stuff instead of making a clean easy cut, which old planing mill men can tell by that peculiar sound given by a mill when it is in good nice working trim. The side-cutters are now looked after, and we see that each bit has done an equal share of the work and are all dull alike; and in filing them to use again, pains are taken that every bit is the same bevel and they are set out alike, and if for working two sides they are set perfectly square and filed, so that they will make a tight joint on the surface. We see the work coming from this mill as near perfect as it can be. The work comes just right, and the matching is neither too loose nor too tight. So ends this picture.

We might keep turning and changing the views almost indefinitely and still there would come continually perfect representations of the different characters, who have the charge of some one of the thousands of mills running in the different parts of the country. Each individual must show his individuality in his personal work, and owners must test these different realities to see which best comes up to the standard which they demand.

NUMBER OF TEETH IN A SAW.

It certainly seems to me that a man must be devoid of all reason and common sense when he undertakes to tell what guage of saw, number of, or shape of teeth is the best for all purposes. Why, sir, I have seen saws advocated in the numerous articles in your paper of late that would do (if properly filed) splendid work on some mills, and on others would not go one-half its diameter into the log before it would be broken into hundreds of pieces and scattered all over the adjoining country. Where would a 20 to 30 tooth, No. 10-gauge, 56-inch saw be in a 24 inch cut of yellow Texas pine, on a 9 to 12 inch feed, with belt and engine power behind it sufficient to drive the arbor its 850 revolutions per minute, whether the saw went straight or crooked? It would be *non est* in about a second after it touched the log. Again, what would be the result of a 100-tooth, 7-gauge, 56-inch saw on a 1½ to 2-inch feed, in yellow poplar or white pine, with light power to drive it? It would scrape away (not cut) until the belt slips, engine checks down, and the speed of itself slowed down so that the centrifugal force is not sufficient to keep the saw straight against any pressure on the teeth, and consequently doubles up or flops over one way and then the other, until it gets hot from the point of teeth to the eye, and you can do nothing with it until it is cooled off: then you start again and have a repetition of the same.

Now, all I will say in reply to those who think the fewer teeth you have the lighter your saw will run, is for them to try the experiment of laying a board down on some solid foundation, and then take a quarter-inch chisel and place it just far enough from the end so that it will cut

a chip and not scrape, and they will find the chisel can be pushed through any common wood very readily ; and then take the same chisel and same board, place the chisel two or three times as far from the end in some other place, and they will find, instead of being able, as before, to push it through by hand, it will require several blows on the chisel, with a mallet or some thing else, which seems to me proof enough that it does take more power to each tooth of the saw that has the less teeth do the same work. Now, they will all probably admit that, but claim that it does not take double the power to each tooth of a 20-tooth saw that it does to a 40. Now, of course, there is reason in all things, and if your feed is enough, say 3½ or 4-inch, so that your 40-tooth saw can get a firm hold on the timber and cut, the teeth of the 20-tooth saw will each take more than double the power, and besides will require a heavier saw, as the strain is not so easily divided on the rim ; in fact, it would scarcely run at all on that feed in hard wood. But if the feed is not more than 1½ or 2 inch, so that the 40 teeth could not cut but scrape, why of course the 20 teeth would cut and consequently run lighter.

Not long since I was filing for a large mill where among the saws were three new ones from Henry Disston & Sons, all splendid saws, good temper, etc., excepting they were 6x8 gauge. (All saws for sawing logs should be straight—they run steadier and can be run with less swage than a bevel saw.) Now two of these saws were 80 teeth and one a 60-tooth. Our feed when the frictions were new was 7-inch, but we would not put on new ones until the feed would wear down to 2-inch. When the frictions were new the 80-tooth saws would go on the arbor in their turn, and run one-quarter of a day, cutting about 15,000 feet, when I would change for a fresh saw, whether they needed changing or not ; but when the turn come for the 60-tooth to go on, it would only be with utmost care in filing and cautious handling of the carriage runner in hard logs and deep cuts that it would stand up for more than 1½ to 2 hours. But when our feed had worn down to 5-inch, the 60-tooth would stand up as straight as a stretched string in all cuts, and do its work on 80 pounds of steam where the other saw required from 90 to 100 pounds to do the same work. There is no rule for the guage of saws, number or shape of teeth that will work regardless of feed. On the feed depends everything, and I defy any living man to prove otherwise. Now, one can first find out his feed and timber to be sawed, then tell very near (if he understands his business) what gauge of saw and number of teeth would do the work properly, with the least power.

I have found 12 teeth to the inch of feed on straight 8-gauge saws to be about right for yellow pine. Very hard wood or thinner saws require more teeth in proportion, A saw should be strained or hammered, so that when it is at its speed and cutting in the log, the rim, (which is expanded by contrifugal force and work the teeth are doing) will not warp sideways, but be perfectly straight and stiff. If the eye is tight and stiff when standing still, it will hold the rim from straightening out when in motion ; consequently, as it expands it must go somewhere and will warp and assume a snake-like appearance. On the other hand, if the eye is too open or loose, and the expansion of the rim does not take up all the slack when running, the saw will not be stiff and firm, and will give back when striking the log, causing the eye to push out or in, and rub either log or board and heat. Every saw filer should be a practical saw hammerer, or at least understand the theory of it ; for very often much trouble arises from a saw not being properly strained for the speed it is run, though the number of teeth and shape of them may be all right.—*J. F. Capron, in Cincinati Artizan.*

LARGE STICKS OF TIMBER.

Descriptions of some of the big sticks of timber of the Pacific coast, are well calculated to excite the credulity of many of our mill men who are used to dealing with much smaller timber. The *Architect and Building News*, of San Francisco, in speaking of some of these large sticks, says : One piece is 144 feet long by 18 inches in size, and contains 3,456 feet of lumber. For over 100 feet there is no knot that a five-cent nickel will not cover, and in the whole piece of timber the largest knot can be covered by a half dollar. It is wonderful that a stick of timber of the size given should be so remarkably clear of knots. Its companion is of the same length, 16 inches square, and contains 2,352 feet. When it is taken into consideration that the tree from which the first mentioned piece of timber was taken was cut several feet above the ground, and that 150 feet from the cut made to fell the tree it was of such a size as to enable millman to saw the log so as to produce a piece of timber of the size given, one can imagine the size the butt must be, and partly comprehend the amount of labor required to handle such an immense stick. It costs about one-half more to land on our warves a stick of timber of the size mentioned that it does of ordinary lengths. These pieces of timber were sawn at the Port Blakely Mills, Washington Territory, the owners being Renton, Holmes & Co., the well-known lumber merchants of this city. A short time ago there was received in this city a stick of timber 104 feet long, 24 inches square, and almost free from knots. After its arrival here it was allowed to be on inspection for a short time, when it was taken to one of mills and sawed into joists, as the purpose for which it was manufactured was given up and no use could be found at the time for a stick of timber of such large dimensions.—*The Woodworker,*

FOREST FIRES.

Passengers on the Fredericton express Saturday evening, from the time the train left Nerepis until it reached Rusagornish station passed through a continuous gauntlet of fire. At several points near the track, especially along the Fredericton branch, large fires were burning freely there, lighting up their surroundings for miles. Innumerable small fires also seemed to have been set by the falling leaves, which, all on fire, were carried long distances by the wind. Several miles back of the track huge fires in the woods were reflected in the zenith like the lurid glow of a burning city. The air along the rail was stifling and some of the passengers suffered considerably. Fredericton was enclosed in a dense pillar of cloud this morning, which utterly shut out the sky and rendered all objects invisible at a distance of about one hundred yards. Big fires were raging back of the city near the race track, seriously threatening the city. The effect of another week's drought is fearful to contemplate. Earnest prayers for rain were offered in most of the city pulpits at the capital yesterday. At Douglas, Stanley, Heron's Lake, Hanwell, and Keswick, the fires have spread over thousands of acres, and miles of fences on the Keswick have been destroyed. From Stanley, Major Wilkinson (71st Batt.) and a company of men only succeeded in reaching St. Mary's Sunday night after a gallant struggle, as the fire lapped over the Miramichi road in places and the horses were badly frightened. Farmers at Manners-Sutton had a hand to hand fight with the flames. Great anxiety prevails at Fredericton and outlying districts.—*St. John, N. B. News.*

THE lake receipts at Buffalo, N. Y., for September, were 37,350,000 feet of lumber and 6,100,000, shingles, and for the season to October 1, 165,127,000 feet of lumber and 30,096,000 shingles.

THE Northwest Lumber Company, at Selkirk, Man., will this winter improve its mill. An addition 30x40 feet will be made, that will contain a first-class trimmer and slash board. An office 18x24 feet will also be put up at once.

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The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

A REMARKABLE RESULT.—W. A. Edgars, of Frankville, was a terrible sufferer from Chronic Kidney and Liver Complaint, and at one time was so bad that his life was despaired of. He was cured by four bottles of Burdock Blood Bitters.

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., NOV. 1, 1883.

THERE are twenty saw mills along the line C. P. R. from Thundor Bay west, with an aggregate cutting capacity of about 1,000,000 feet per day.

AN Ottawa correspondent says that Mr. W. H. Baldwin has invented and manufactnred a gang circular saw mill which he calculates will saw up three eighteen ineh logs per minute.

AN artificial riso of soven feet in the Chippewa river cleared out from 10,000,000 to 15,000,000 feet of seattering logs, bringing them from Paint creek and Little Falls to the Beef Slough, Wis., works.

THE Kingston *Whig* says :—People have little conception of the supplies that go out on the Kingston and Pembroke R. R. for the lumbermen. One consignment of 250 half chests of tea was sent by a grocer to a shanty this week.

JOHN F. Carr, a New York lumber doaler, who has for many years interested himself in working up the redwood trade, rocently shipped 40,000 feet of that lumber to Australia, and has made several shipments to England and Germany.

THE finc forests of Arkansas are beiug rapidly opened up to trado, by the numerous saw mills which are rapidly springing up all over the timbered sections. More mills are probably being built thero than in any other state in the union.

THE Edmonton *Bulletin* of Sept. 29th says: Dan Noyes delivored three rafts of saw logs to Hardisty & Fraser's mill on Wednesday. On the trip down one of them was partially wrecked at Big Islands owing to the low wator. About thirty of the logs were lost.

MR. RUSSEL HEATH, of Carpenteria, Cal., has an English walnut orchard of two hundred acres of rich level land noar the seashoro. The trees aro from ten to twonty-five years planted. His crop in 1882 was 630 sacks of 70 pounds oach ; this season he oxpects the harvest will aggregate about one-third more.

A CORRESPONDENT of the *Northwestern Lumberman* who has visited the mill of the Tacoma Mill Company, located at Tacoma, Washington Territory, says that the logs, as they come into the mill, are covered with teredos, a species of small shell-fish. The slaughter caused by the saws is tremendous, and a constant fishy smell pervades the mill.

THE *Northwestern Lumberman* says that a reliable estimate lately made upon a certain quarter section of redwood timber in California was 32,000,000 feet. In comparing this with the pine lands of the Saginaw, Mich., distriet, it is stated that 2,000,000 feet was an extraordinary growth on the best of the land, when good forties were plenty, and 100,000 feet to an acre is called the biggest yield on record in the Saginaw region.

THE *Timber Trades Journal* says :—The adoption of wood paving in the principal provincial towns is steadily on the increase. Some towns, such as Norwich, Liverpool, &c., have spent largo sums in recent years. At Plymouth this paving has been so much appreciated that the Corporation has resolved to lay down a further quantity in Bedford Street, and at Northampton tenders are invited for laying down 1,200 yards of wood paving to replace granite blacks.

A KENTUCKY paper states that Dana, the great coal man of the Kanawha valley, says that sawdust has saved him hundreds of thousands of dollars. When a coal barge becomes so leaky that pumping will not overtake the inflow, sawdust is used as follows : A nail keg with both ends out, nailed to a handle, and with dampened sawdust packed thorein, is jogged against the bottom of the barge, the sawdust hunting the crevices, and the remedy is effectual. F. R. Kaulberseh saved a demoralized barge at Galliopolis in this manner recently.

THE proposal to hold an "International Forestry Exhibition" in Edinburgh during the summer and autumn of next year has been taken up with much earnestness in Scotland, and a large sum has already been obtained, without any direct appeal to the public at large, as a guarantee fund. Besides specimens of forest produce, implements used in forestry, fungi, rustic work, etc., there will be a collection of illustrations of trees, scenery, forest labor, and the like, along with books, maps, and reports bearing on forest history, surveys, and the geographical distribution of trees.

THE committee of the proposed International Exhibition of Forestry, at Edinburgh, has already received largo contributions and hearty co-operation of the Duke of Buccleuch, Lords Derby—who takes a particular interest in forestry—Rosebery, and others. It is intended that the exhibition shall embrace all the objects of forest economy, and illustrate the various modes by which, in different countries, forest products are utilized ; while also bringing together specimens of forest fauna and objects illustrative of the commercial, scientific, social, and legislative aspects of forestry and forest conservancy throughout the world.

GAS FROM SAWDUST.

To the Editor of the Canada Lumberman.

DEAR SIR,—My attention has been directed to an article in your issue of Oct. 1st, entitled "Gas From Sawdust," which contains certain erroneous statements which seem to me to need correction.

The article in question quotes an item from the London *Timber Trades Journal*, in which it is stated that "Mr. R. Tomlinson, late manager of the Cottingham Gas Works, near Hull, has just completed the erection of the gas works for lighting the town of Deseronto, Ontario, Canada, the works being erected for the purpose of making gas from fine sawdust."

The Mr, R. Tomlinson referred to in the above item came here some months since in search of employment as a pipe fitter and was employed by me in that capacity for a few weeks, but I was obliged to discharge him on account of his too frequent potations of "fire water." Mr. Tomlinson had an exuberant imagination which becomes very vivid indeed when under the influence of "fire water," and it is probable that during one of his frequent potations he communicated the *information* concerning the Deseronto Gas Works to the London *Timber Trades Journal*.

As a matter of fact I am, as far as I know, the only person who has conceived or put in practice the idea of making illuminating gas from sawdust, and the works here for making gas from sawdust have been erected solely under my supervision.

The statement in your article that the gas made from sawdust is far superior to that made from Cannel coal is an erroneous one, sawdust gas being by no means equal to that made from Cannel coal, but the quantity obtained from an equal weight of sawdust is about four times as great, and the addition of a small amount of Petroleum gas brings the illuminating power up to any point desired.

Yours respectfully,
GEORGE WALKER,
Manager of Gas and Chemical Works for the Rathbun Co., Deseronto, Ontario.

NORTHERN MANITOBA.

Meeting Mr. F. T. Graffe, lately arrived from an exploring expedition up the Winnipeg and Bear rivers, some one hundred and twenty miles distant from Winnipeg, a *Times* reporter interviewed him and obtained the following information :—

"The settlement abuts on the Indian reservation which extends some three miles above Fort Alexander. The soil is, generally speaking, a rich clay loam, heavily timbered with poplar, birch, spruce, tamarac and jack pine—the ridges being covered with a good quality of oak. Soft maple and blue beech are met with in the low lands, and thickets of cranberries (high bush) and wild plums are numerous."

"As a lumbering country what do you think of it ?"

"I have seen none better in the Province. There are two saw mills situated on the Winnipeg river—one driven by steam and the other by water power, the latter being located at Pine Falls, seven miles from the mouth of the river. As regards the capacity of these mills, I cannot speak positively, but I should judge that they would each average about 45,000 per day, consequently the settlers are well provided for in so far as building requirements are concerned."

TIMBER AND HEALTH.

How fatal are the results which attend careless indifference on this point, says the *Builder*, is singularly shown by what has followed in Italy on the disforesting of the once well-wooded peninsula. Not alone have the recent terrible inundations in the north of Italy been directly traced to this cause, but the fatal *aria cattiva*, the poisonous breath of the marsh lands, which has within twenty years or so invaded almost every province of the peninsula, now reigns supreme, driving from the once fertile plains thousands of the unhappy inhabitants. Here we see the direct influence of false economy in this one direction. When we consider, in addition, that Italy could, undoubtedly, by proper management, grow a large portion of the timber which at present she has to import, we see another direction in which a false economy has impoverished and impoverishes an already poor nation. England, without having reached this sad position, cannot be said to be beyond blame. There exists in our country many a broad stretch of land which, by the action of science, might be rendered productive, and at the same time beautiful. The growth of timber is not of a nature to tempt the speculative demands of modern private initiative ; it is for this reason that it behoves the Government, or, at least, local authorities, to take up the question. They, at least, standing virtually independent of the consideration of immediate gain, are the only fit instruments by which such work can be done ; but the system once set in order, the returns, it is evident, will be no less regular, even more so than from the ordinary sources of profit. A close study of the matter—an inquiry into the admirable methods adopted on the continent, in France, in Belgium, and in Germany—would form an interesting subject of inquiry either for some Government commission, or for some privately appointed body. The question is one of something more than passing interest. Whence are we to obtain our supply of timber? Nature unaided will soon cease to be able to satisfy our demands ; but we have here another of the many instances where science intelligently directed can solve the difficulty, and thus once again be of the utmost service to the world not alone practically, but æsthetically.

THE OTTAWA RIVER.

Mr. W. C. Edwards, of Rockland, some time ago addressed a letter to Mr. J. W. McRae, of this city, in regard to matters concerning which lumbermen doing business along the Ottawa have reason to complain. He points out that for the last year or more there has been some agitation regarding a proposed scheme for the purpose of overcoming two difficulties which almost annually are a source of great loss and inconvenience to the inhabitants residing along the banks of the river and to lumbermen, namely, (1) the flooding of the banks of the rivers in the spring of the year, a vast area of what would be valuable agricultural soil being rendered almost unfit for cultivation ; and (2) extreme lowness of the river in midsummer. This is a question which has already occupied the attention of Mr. John Rochester, and it will be remembered that he brought it up in Parliament but so far nothing of a practical nature has been done. The desirability of action is again being forced on public attention. Mr. Edwards points out that both difficulties have been growing for some time as the country has been cleared up, and are seriously felt by all who have anything whatever to do with the navigation of the river. Unless something be done to remedy the state of affairs complained of the evils must continue to grow. Mr. Edwards says :—

"First, the clearing up of the forests on the main river and its several branches causes the snow to melt rapidly as this progress of clearing goes on and thereby a greater volume of water is poured into the river during a shorter space of time each year, and it must be patent to an ordinary observer of such things what the course of this difficulty must be. Unless some artificial means are resorted to to hinder it, it must go on increasing year by year, and the damage mus be greater. Next, from the same cause the navigation of our river must grow continually worse. Not only does the surplus water, or the water created by the melting of our winter's ice and snow, run off earlier in consequence of the clearing up of the forests, but for the same reason our average downfall of rain is becoming lessened during the summer season, and evaporation is very much increased, all tending in one direction, viz.: To cause the navigation of the stream to grow year after year more difficult. Now in my opinion both these difficulties would be greater to-day than what they are were it not for the many dams built by the lumbermen on the several branches of the Ottawa, and the streams and creeks tributary to the same for driving purposes. Was the whole body of the water kept back by this means, until required by the lumbermen, allowed to flow into the main stream each year, the deluge caused thereby would be very great, and bad and all as matters are to-day they would be very seriously worse."

Mr. Edwards goes on to point out that damage done is of so serious a nature that the attention of Parliament should be called to it. He says it has been suggested by practical men who have given the subject consideration that the difficulty complained of can be overcome by a process of damming up the larger lakes in the main river and some of its branches, which are not and never will be dammed by the lumbermen. By this process of damming he thinks the freshets could be largely decreased in volume by holding back in the dams large bodies of water, which would otherwise run off. It is held that if the water thus retained in the spring were allowed to run off gradually in the summer it would furnish a sufficient supply to keep the navigation of the Ottawa good throughout the season, Mr. Edwards urges Mr. McRae to take the matter up by securing the formation of a committee at Ottawa for the purpose o

making such representations by petition to Parliament as will convince members of the desirability of supporting the carrying out of such a scheme as is proposed. The question is one of considerable importance, and one which must sooner or later demand attention.—*Ottawa Citizen.*

PAPER PULP FROM CEDAR BARK.

A new use of cedar has been undertaken at New Bedford, Mass. The Acushnet Paper Mill, at that point, is nearing completion, and was built for the express purpose of manufacturing pulp and paper of cedar bark. It is the first enterprise of the kind ever undertaken, though the process has been satisfactorily tested on a small scale. An agent of the company is now in Maine purchasing a supply of bark. There is a large quantity at Bangor, Calais, and at St. John, N. B., where large quantities of cedar shingles are sawed. The bark is taken from shingle buts, that are 16 inches long, and are bundled for shipment like lath. The Acushnet mill will work up three cords of bark a day. The first product will be used for carpet linings, but the paper is said to be equally adapted to other important uses. For carpet linings it will be unequaled, on account of its quality of keeping off insects. Eastern ingenuity is bound to devise an endless variety for the utilization of woods, this invention for making paper of cedar bark, being the latest evidence of it.—*Northwestern Lumberman.*

WOOD PULP ROOFING.

A Mansfield, Ohio, company is said to be manufacturing a roofing material from woodpulp, consisting of two-thirds spruce and one-third poplar. It is then prepared, under patents owned exclusively by the company, in such a manner as to give the greatest durability, and adapt it generally for roofing purposes. It is claimed to be the best roofing in the world, all things considered. It is not affected by heat or cold, as metallic roofs are, nor can it corrode. It is much lighter than slate, and can be walked upon without injury. It is practically fireproof though not absolutely non combustible. It can be used on any kind of roof having not less than 1½ inch fall to the foot. It is especially adapted to locations where smoke and sulphurous gases abound, which generally destroy metallic roofs in a short time. It is flexible, and can be used for valleys, flashings, ornamental cut-work in gables, panels, bay windows, verandas and irregular-shaped roofs. It can also be used with perfect success for sheathing warehouses and grain elevators,

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Oct. 19 :—

	1881.	1882.	1883.
Waney White Pine..	2,629,651	2,663,811	3,213,318
White Pine.....	5,578,546	7,599,814	6,747,758
Red Pine.....	1,874,730	1,435,065	464,690
Oak.....	2,685,159	1,149,452	1,750,207
Elm.....	1,010,395	701,026	309,261
Ash.....	397,906	263,196	257,028
Basswood	3,576	1,273	2,244
Butternut.....	2,991	2,639	1,028
Tamarac	24,416	51,448	7,409
Birch & Maple.....	151,742	268,333	138,803
Masts.....	25pcs	33 pcs	—pcs
Spars.....	— pcs	51 pcs	— pcs
Std. Staves.....	368,7.2.29	352.6.3.12	627.0.1.22
W. I. Staves.....	445.4.2.20	1150.9.0.12	510.2.3.05
Brl. Staves.....	.....	75.4.3.23	87.2.1.19

JAMES PATTON,
Quebec, Oct. 19. Supervisor of Cullers.

International Exhibition of Forestry.

The thirtieth annual meeting of the Scottish Arboricultural Society was held recently in Edinburgh. Thanks was awarded to Mr. Little, Montreal, for a gift to the Society's museum of 60 specimens of Canadian wood. Referring to the International Exhibition of Forestry to be held in Edinburgh next year, one of the members said the prospects of the exhibition were highly gratifying. The exhibition was assuming much wider proportions than he ever had contemplated; and it appeared to him that if it went on as at present this would not be the only exhibition of the industrial arts in Scotland, but be only one of a yearly series, such as those held at Kensington. If the Lord Provost and Magistrates granted the use of Castle Hill gardens, the committee could erect buildings of a handsome description thereon in the form of Swiss chalets of a rustic nature, emblematic of forestry. One of the courts might be devoted to Indian exhibits, another to Australia, another to Canada, another to the United States, and so on. The idea met with much favor.

Timber for Well Work.

The best timber for curbing a well is hemlock, which is very durable when under water, and gives no flavor to the water. If hemlock cannot be procured, tamarac would be the best. The timber should be cut in two or three inch planks, and put together by halving the timbers at the end and holding the halved parts dovetailed or cornered together, so that the sides cannot be forced in by the pressure of the earth—the upper half of one piece fitting upon the lower half of the other piece.

THE *Northwestern Lumberman* says :—There is another story afloat about a buzz-saw encountering a bomb-shell that was embedded in a log. this time the incident happened in New Orleans. Before it was in South Carolina. The forests of the South were well peppered with shot and shell during the late unpleasantness, and it would not be surprising if embedded shells should use up several saws. But when once one of these stories is stated there is no telling how it will multiply.

A. & T. J. DARLING & Co.
TORONTO, ONT.
Specialties—"Darling" Axes, Saws, Cutlery, "Black Diamond" Files.
HARDWARE.

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A LATH TRIMMER,
NEW, and in good order, will be sold Cheap. Address,
THE RATHBUN COMPANY,
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SPALT MACHINE
For saving Lumber refuse, second hand, but all complete and in good order, taken out to replace one of greater capacity. Address,—
THE RATHBUN COMPANY,
6L19 DESERONTO, Ont

FOR SALE.
THE SUBSCRIBER OFFERS FOR SALE THE LEASE AND MACHINERY, PLANT, &c., OF HIS
SAW MILL
AND
LUMBER YARD
In Ashburnham.
For particulars apply to
J. Z. ROGERS,
6d89-2L21 Peterborough.

WATER POWER
TO LEASE.
THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.
R. & G. STRICKLAND
1d86 LAKEFIELD, ONT. w15L9

SHINGLE MILL MACHINERY.
Parties requiring New Machinery for Shingle Mills, will do well to communicate with us before purchasing.
THE RATHBUN COMPANY,
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SAW MILLS
AND
TIMBER LIMITS
WITH
Logs, Lumber, Store Goods, &c
FOR SALE
In the District of Algoma, Ont.
Eighty-Five Square Miles (54,400 Acres) of Limits, Good Pine, First-Class Water Power, Large New Water Mill, Steam Mill, Store and Dwellings.
Canada Pacific Railway now running through part of the property.
For full particulars address :—
WILLIAMS & MURRAY,
L7tf GODERICH, ONT.

SAW MILL MACHINERY FOR SALE.
STEEL AND IRON
Slabbing and Stock Gang Gates
WITH OSCILLATING MOTION, ALSO,—
IRON PITMANS, FLY WHEELS, Driving Pulleys, and other Saw Mill Machinery,
In Good Order, which has been taken out of Mills that have been closed. Address,
The RATHBUN COMPANY,
8L20 DESERONTO.

MACHINERY,
ENGINE, BOILER,
ROTARY MILL, &c.,
IN THE
St. Martins Manufacturing Co's Factory and Saw Mill at St. Martins,
CONTAINING
A Waterous 80 H.P. Engine and Boilers, Rotary Saw Mill,
Saw Tables Planers, Shafting, Hangers, Pulleys, Belting, Lathes, Pumps, etc.
One Fleming & Sons' 50 H.P. Engine and Boiler,
Waterous Saw Mill, Daniel Planer, Band Saw, Planer and Matcher, Saw Tables, Shafting, Belting, etc.
If not sold *en bloc* by the 10th of October, will be sold in lots to suit purchasers.
Catalogues giving particulars of the Machinery, etc, can be had from the liquidators, or at the offices of W. H. OLIVE, No. 167 Prince William Street; T. McAVITY & SONS, 13 King Street, St. John; and W. E. SKILLEN, St. Martins. 4L21

MAPLE TIMBER.
Parties having quantities of first-class HARD MAPLE that they can cut to sizes as furnished, please communicate with us.
W. H. BROWN & Co.,
4L13 INGERSOLL, Ont.

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LUMBER AND TIMBER.
Building & Bridge Timber Sawn to Order.
Pine, Spruce and Hemlock Lumber by the Cargo.
Steam Saw Mills, Box Factory and Yards.—342 to 390 William St., and 130 St. Constant St., Montreal. Steam Saw Mills, L'Assomption, P.Q.
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STEWART & FLECK, Jr.,
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Water Wheels, Steam Engines, Derricks, Boilers, Steam Pumps, Mining Machinery
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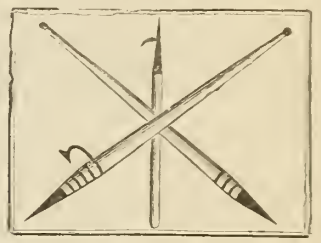
HAND SPIKES  CANT DOGS
Lumberman's Tools, etc.,
HIGHEST AWARDS IN CANADA and U.S.
L20-1y CHAUDIERE, OTTAWA.

ST. LAWRENCE CANALS.

Notice to Contractors.

SEALED TENDERS, addressed to the undersigned, and endorsed "Tender for St. Lawrence Canals," will be received at this office until the arrival of the eastern and western mails on TUESDAY, the 13th day of November next, for the construction of a lock and regulating weir and the deepening and enlargement of the upper entrance of the Cornwall Canal.

Also for the construction of a lock, together with the enlargement and deepening of the upper entrance of the Rapide Plat Canal, or middle division of the Williamsburg Canals.

Tenders will also be received until TUESDAY, the 27th day of November next, for the extension of the pierwork and deepening, &c., of the channel at the upper entrance of the Galops Canal.

A map of the head or upper entrance of the Cornwall Canal and the upper entrance of the Rapide Plat Canal, together with plans and specifications of the respective works, can be seen at this office, and at the Resident Engineer's office. Dickenson's Landing, on and after Tuesday, the 30th day of October next, where printed forms of tender can be obtained.

A map, plans and specification of the works to be done at the head of the Galops Canal can be seen at this office and at the lock keeper's house, near the place, on and after TUESDAY, the 13th day of November, where printed forms of tender can be obtained.

Contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms, and—in the case of firms—except there are attached the actual signatures, the nature of the occupation and residence of each member of the same; and further, an accepted Bank cheque for the sum of *Two Thousand Dollars* must accompany the Tender, which sum shall be forfeited if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted.

The cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tender.

By order,
A. P. BRADLEY,
Secretary.

Dept. of Railways and Canals,
Ottawa, 28th Sept., 1883 d78-1aw

THE LIVERPOOL MARKET.

The October circular of Messrs. Farnworth & Jardine contains the following :

The arrivals from British North America during the past month have been 59 vessels 51,527 tons, against 24 vessels 18,598 tons during corresponding month last year, and the aggregate tonnage to this date, from all places, in tho years 1881, 1882 and 1883, as shown by the table below, has been 256,860, ,284,089, and 322,082 tons respectively.

The arrivals have again been heavy, and, notwithstanding there has been a large consumption, stocks are rapidly increasing, and the market is weaker.

CANADIAN WOODS.—Yellow Pine Timber: There has been a fair demand for prime square and waney timber, but commoner qualities are difficult to sell; stocks are heavier than they were a year ago. Red Pine has been in fair demand, though at rather low prices. Elm and ash have come forward more freely and have met with ready sale. Oak: There has been a steady demand and prices have been fairly maintained; planks for waggon building still rule at disproportionately lower prices. Pine Deals: The better qualities are scarce and wanted, but of third quality there is a large stock and prices rule low. Staves: Pipe continue in good demand, but puncheon are dull of sale at low prices.

NEW BRUNSWICK AND NOVA SCOTIA SPRUCE AND PINE DEALS.—The consumption has been good but the arrivals have been very heavy and stocks are increasing, being fully double the very light stock of last year, though only 25 per cent. larger than in 1881, prices are lower and have now touched a point at which importers may fairly consider it safe to hold. Lower Port Pine Deals have arrived pretty freely, and have been sold at low prices. Birch: There has been a rather large import and the consumption has also been large; prices are easier.

NORTHWEST TERRITORY.

We take the following extracts from the official report of the evidence of Prof. Maconn, Botanist to geological survey, hofore the Committee on Immigration and Colonization :

Q. On these very dry plains, you say they were dry because the water could not permeate the soil?—Yes; particularly on accouut of the old soil. The salt lands of the North-West get so thoroughly baked in the dry weather that it is impossible to penetrate them, and yet when they are broken up in the spring and are a little moist, they are like ashes, and remain so in the summer if they have been broken, but if not, the rain evaporates and none goes into the soil, and that is my reason for saying it is climatically not barren.

Q. What about the rainfall?—The rainfall of the south is light and the rainfall of the north is heavy. Wo all know what the cause of the deficiency of rainfall in Ontario at the present time is, There is a gentleman who has a big farm and it is without grass or anything upon it, and he sees a rainstorm, a thunder storm, coming in the distance, and one part of it goes to the right and one to the left and he is without a drop, and when it passes him the two parts meet again. Why? Because the farm was radiating too much heat and the clouds were dispersed, and instead of the rain storm stopping it dispersed. It is the same in the North-West. The rain is brought from the south, and over the grassy plains, scarcely any rainfall takes place until it comes in contact with the wooded country, and then down comes great quantities of rain, and that is the reason. As soon as cultivation commouces and trees are planted the North-West, instead of being at its worst, as it is now, will improve climatically, the rainfall will be less in the north and greater in the south, and sottlers will be sure of having no drought.

Q. You think there should be treo planting?—Certainly.

Q. Explan why the heat radiating causes the clouds to separate?—South of our boundary there is a radiating surface in the Unitod States of ovor 300,000 square milcs—it may be 500,000. Upon that great plateau to tho south, there aro scarcely any treos. As the moisture that comes in from the Gulf of Mexico or even from the Gulf of California goes over that plain instead of being deposited there, the sun is pouring down heat and this heat is radiated again in the atmosphere, and the result is that moisture and heat are both carried north, both from the east and west, and as they come up over on to our plains, as soon as they strike the Wood Mountain and the Turtle Mountain and the Moose Mountain, where we have a series of broken hills, environed by ponds and covered with wood, the rain pours down. The clouds pass on, and on the interior plain, where there is no wood, you can see a thunder storm playing round a little hill—a local storm—and in another place you get none, because it is a dry region. At the Elbow of the South Saskatchewan there is a group of sand hills. When I was there, there was no rain at the Elbow though there was everywhere near us, because it was too hot. The Clouds passed on up to Humboldt till they struck the wood, and the rain there fell in torrents. We get in the Northwest the rain that ought to fall on the American plateau geographically, but it is carried on up to our country, and I can see the heat flowing far to the north, beyond where any one of us believe, and I see the summer climate there suitable for anything. The heat and moisture of the south is spread over our whole North-West, and in time this will be better understood. When my head is in the grave men will say "Macoun told the truth though it was hard to believe him." Mr. Fleming once asked me, when they woro putting tho railway into the Leatherhead Pass, "why is the country up from Edmonton to Leatherhead so very wet?" I said "it is on account of the glaciers that are around the hoad of the Athabaska and the North Saskatchewan, and tho air comos down and condenses the moisture, and down it comes in groat quantities, and that is the reason why the Peaco Rivor region is a praire and has a light rainfall, because tho rainfall that should go thero is stopped on the watershed of the Athabaska and the Saskatchewan.

Q. Do you think that trees can bo successfully cultivated on the prairie now treeloss, and please give your reasons for such belief?—I profoss to be a scientific botanist, and on that ground I tako my stand. Hore aro certain points: Men have said to mc, "What is tho uso of talking about troes on the prairie? If they were suited for the prairio they would have been thero." Pleaso notico this. Throughout the whole world ovory species of tree has its own particular region. I will give you a remarkable fact in connection with tho prairie maple that is now being planted—tho ash-leaf maple, tho *negundo aceroides*. Where thero is a great deal of moisturo in tho air that trce is not hardy. It is not hardy to tho oast and it is hardy on our plains. That shows that when men say the maple will not grow there bocause it is not found there they are wrong. The maple of the North-West is not hardy in many parts of Canada and the United States, becauso the air is not suitable for its growth. Down to the south of the Coteau, near Regina, at the base of the Dirt Hills, I found growiug *fraxinus viridis*, what you call rim ash, the river ash. Tho Indians make their baskets of it pincipally. I fouud it growing along the base of the Coteau and not in river valleys, but on tho opcn prairie, and other trees in that rogion. Tho bcech, which is a very prominent tree in our woods, nover grows further west than the straits of Mackinaw. Would any ono who found the maple in an isolated group at the west end of Lake Superior, say it is stopped there by the cold? No. Looking at it in that way, I say our maple and trees of that nature, and all our oaks, every one, are sure of being successfully grown in the North-West. All our oaks, because the eaks grow naturally—I am speakiug of our white and black oaks—on a sandy, dry soil in our woods. If the land gets very dry there, which it does net, but if it should, then these trees would have moisture enough to keep them growing. All that is necessary is for the seeds to be taken out to the North-West and planted, and the proof of my words will be found at once. What is the reason why tho country is found without wood? I have gone up and down the prairie on a straight line from north to south, and have always found—I have travelled for eighty miles on a stretch, and have never seen a bush except a rose-bush, not a willow or a poplar, but I got permanent water. Tho first willows I struck were at the northeastern corner of a pool. For instance, there is a pool. The fire would burn on each side and leave the grass, and I would find the willows where the fire could not touch them. The first poplars we would strike would be always in a little depression, where the fire would come up to a little hill first where there was short grass. I found on the big plain north of the Cypress Hills, where trees are not supposed to exist, twenty-three big poplars, 2 ft in diameter, some of them in the midst of the sand-hills, where the fire could not touch them—enormous trees standing alone, buried in sand—and there they are yet, unless they were cut down last year by the C. P. R. people. Willows and poplars do not grow from seed, except when it suits them. They do not depend on their seeds. Cut a willow or a poplar stalk, and put it down and it will grow. These trees propagate from their roots, and then thousands of little trees grow up. People say they come up from the seeds. It is nonsense. They come from the roots. As soon as the root of the willow or poplar is burnt out and rotted, there is no power in the prairie to re clothe itself with wood.

Q. This conflicts with the statements given by Professor Bell?—Professor Bell is a geologist. I am a botanist, and I may conflict with any gentleman, for I speak my own knowledge from my own standpoint.

Q. You say the trees are devoured the same as cattlo would devour if thcy were uufenced, and the fire cannot get at them the same as if there were a fence to stop the cattle?—Exactly, thcy are fenced from the fire. In the driest part of the country, I was camped near the Elbow of the South Saskatchewan, where none of the storms would come near us. There was lots of wood. We were in sand hills and tho fire could not burn it out, and in every place where there is sand there is wood.

Q. Mr. Darwin agrees with you entirely. He mentions where a piece of wild land was fenced, and there was no appearance of trees, and in a fow years it was full of vegetable and animal life?—Not a doubt of it.

Q. Have you examined the catalpa tree?—I have. I was talking with Mr. Saunders, of London, about that trce. Any tree that ripens its wood—I mean, for instance, our common lilac; it takes a rush in the spring, grows about 8 inches or 10 inches and stops, and no power can make it grow any more that season—any tree of that type can stand the North-West climate, because it will harden its wood. If the catalpa hardens it wood, it will stand the North-West, because it is not the intense cold that kills trces. It is their inability to resist changes of temperature. That is where the question comes. If the North-West was subject to such changes as we have here—for instance, a sudden thaw, and the temperature rises to 50°, and a few days after the sap would be flowing, say, moving down to 40° below zero again. Our trees burst and our fruit is destroyed in that way.

Q. We could not expect, theu, that our fruit trees would succeed in that climate?—You are right there.

Q. How about these Russian varieties?—I have brought this pamphlet with reference to that.

Q. Do you believe that at any time these prairies were covered with timber?—I have not the slightest hesitation in this answer. No one on this Committee, who is acquainted with the east, ever saw trees growiug in a salt marsh. Every salt marsh in tho North-West, I am quite sure trees would not grow there, because vegetation of a certain character will not grow where there is a superabundance of salt. Then the St. Pierre beds, where the wasting clays are goiug on, there are certain tracts of those lands that I do uot thiuk were ever covered with trees in the past. They were unsuited for the growth of trees. With the exception of these two tracts, I believe our whole North-West has been covered with trees.

Q. You only saw small trees there?—Poplar, the two or three kinds of poplar, or the poplar of the region.

Q. You never heard of stumps being discovered in any excavations in the North-West, have you?—No.

Q. You say the whole country of the North-West must have been covered with forest, except those places you montioned?—Yes, I am quite positive.

Q. Except those places, you believe the same conditions geographically and climatically exist, that existed when the forests were there?—Yes; except that to-day the North-West is at its worst, because the south is abnormally dry and the north abnormally wet, owing to the want of forests in the south.

Q. But not sufficiently to prevent vegetation?—No.

Q. If the fire sweeps over the ground, it destroys the trees and burns the stumps?—There is a book written in the year 1859. In that book, Professor H. G. Hind, of Windsor College, N. S., records his explorations. Where he saw large forests, I passed over in 1880 and never saw a twig, because the stumps and everything were gone as you state.

Q. Did you ever observe shrubbery and some trees on the north side of the hills and the south side bare?—Yes. Here is where Palliser went wrong on that. I went and looked at the same hill he mentioned. The sun shone on the southern part of the hill. All the fires come from the southwest or the west. As soon as the fire comes, the south of the hill is dry. The fire comes to the south side of the hill and sweeps off a line of the timber. Next year it goes further in, and at last the whole southern part of the hill is clear of timber. The other side of the hill is damp and the timber remains there because it is not burnt off. There is not a river throughout the length and breadth of the North-West, and up to latitude 62 or 63 that the north side of the river is totally without wood, while on the south side it is just the opposite. In latitude 56 the cactus was growing on the north side of the river, and on the southern I got the Arctic flora. The southern slopes are always dry and always burnt.

Q. Is it not the case on the Qu'Appelle River at some points?—The Qu'Appelle River, from one end to the other, is without wood, except in the ravines.

Q. I travelled through the treeless valley of Dakota and found in a number of places, where the timber had been protected, where there perhaps was not a tree within a hundred miles, there were places between lakes where the fire had never reached, I have seen timber cutting 60 cords to the acre, and that satisfied me a large portion of the country had been covered with timber. They are planting there now, altogether almost, ash-leaf maple and the catalpa, and they claim that those two trees will flourish the best in the North-West?—I am in favor of the catalpa.

Q. You attribute the bareness of the southern slopes of the hills altogether to fires. Would it not be caused by the heat of the sun rotting the bark of the trees?—No; I deny that. No proof can be given that the sun destroys any trees in the North-West.

Q. Not even fruit?—That is a question I want to find out. I agree that our present fruit, with one or two exceptions, will never do in the North-West.

Q. Do you think that if raised from the seed, they would become acclimatized there?—I do: at least a part of them.

Q. Does not the wild plum occur there?—Yes.

Q. Would not that make an excellent stock for fruit trees?—No; I have tried it. It will not work.

Q. There was no indication of decay in these two trees, while in a number of others there was indication of decay?—I think the catalpa is like the lilac, grows for a time and then stops for the season.

Q. You gave an interesting description of the country about Gaspe and north of the lower St. Lawrence, but there is a very extensive country between Lake Nipissing and Lake of the Woods near the line of the Pacific Railway, and the climate is mild towards fall. How do you accouut for that. What influence would these inland lakes have on the climate?—Lake Superior makes the climate in the vicinity of the lake of a low temperature all the year round. The reason I mention this is—I compared the

tables for Halifax, N. S., and the tables for Fort William, Lake Superior, and found the two had about the same summer temperature. Three miles outside of Fort William, as you go up the Dawson Road, the whole character of the country changes, and instead of having the temperature of the lake shore, it has the temperature of the more favored localities in Ontario—speaking from plants. I could see no difference in the plants.

Q. About the Mattawan?—Yes. When I was at Mattawan, I found everything there growing as thrivingly as anywhere else. The influence of the lake ceases as soon as you attain the level above the lake. I was at the Pic and Nipigon and all around there, and, as you receded from the lake, I found the temperature change, and one or two miles from the lake it became the same as the whole way across. I am positive that all that we need is the application of common sense to the knowledge we have, to show that our vast interior here has a climate suitable to the growth of everything we need. But local causes produce local effects, and I am speaking only on the general line. I have no doubt the whole of the line of the Pacific Railway will be found suitable for continuous settlement except through the marshes.

Q. Half of that country or a large portion of it is covered with water. There are many deep lakes between Lake Nipissing and Lake of the Woods, both south and north of the watershed. These lakes get highly heated in summer though they are cold in the spring. You find a temperature of 70 very often in the lakes. Must not that have an influence on the climate in the fall?—Yes. Snow will fall there before frost comes, and I would not be the least astonished to find that potatoes could be left out in the ground the whole winter, simply because frost comes so late. Owing to the water and the heating power of it, the temperature does not sink locally until it sinks generally, and a sudden change finds everything growing, and down comes the snow and covers it.

Q. Where it was wooded, I understood you to say it would have the effect of bringing the rain fall. What extent of wooded land would it require to produce that result?—In a protracted drought, it would require a great deal to change the condition, but, where the drought was not protracted, a very little would change the temperature so as to cause condensation and produce rain, but where the drought is long protracted—it is not for me to say how much; I could not do it; I shonld be going into the region of theory.

Q. You said water was falling all around some hills where you were?—Yes; and never came near those sand hills because they were so hot.

Q. How much territory was there?—Only five or six square miles.

Q. The trees prevent the evaporation of the absorbed heat?—Yes; and cause condensation.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

DO NOT BE DUPED.—A recently advertised and highly puffed remedy for deafeness has lately been exposed as an unmitigated fraud. Not so with Hagyard's Yellow Oil; none name it but to praise. John Clark, of Millbridge, testifies that it cured him of deafeness.

A GREAT SOURCE OF EVIL.—Every farmer will admit that one of the most destructive evils of good crops is that of worms or parasites that prey upon vegitable life; other species of worms infest the human system and are productive of much suffering and ill health. Freeman's Worm Powders will effectually rid the system of this trouble, are pleasant to take and contain their own cathartic.

Chips.

The Boston correspondent of the *Northwestern Lumberman* says:—The spruce market is showing considerable activity, a prospect of a shortage at the mills has had a tendency to run up prices, and as the demand is good, the situation is encouraging to those who are able to fill orders. It is even a better state of affairs in hemlock. The demand is larger than the supply, and prices are very firm.

OAK of the finest qualities, chestnut, various kinds of pine, poplar, beach, locust, elm and hickory are abundant in East Tennessee. Black walnut, ash, cherry and holly are obtained in large quantities. The shipments of timber are rapidly increasing in Boston, Cincinnati, New York, and to Europe. Eepecially is the European demand for oak, black walnut, and locust of importance.—*American Lumberman.*

IN the whole world there are no known redwood forests outside of California. It is a significant fact, however, that one fourth more finished lumber, suitable for interior housework, can be obtained from Humboldt timber than from timber grown in any other county in that state. Unlike many other kinds of trees, redwood stumps can be used to profitable advan tage for veneering purposes, slices from these stumps are said to be highly prized, and may probably in time prove almost invaluable.—*American Lumberman.*

THE hand of fate has again been laid heavily upon the property of O. D. Peck & Sons, Oshkosh, Wis., or rather the probability is that it was the hand of an incendiary. Within the last few months this firm has had its saw-mill burned to the ground, and last Thursday the planing mill was destroyed, having on two previous occasions been severely damaged by fire. This time the loss amounts to $75,000, including a quantity of sash, doors and blinds stored in an adjacent warehouse, which was burned. The insurance is $41,300.—*Northwestern Lumberman.*

THE *Lumberman's Gazette* says:—It may be set down as a fact that 350,000,000 fect of the log cut of last winter in the Mississippi district has been hung up and will not reach the market this season, and the same state of affairs exists in the Saginaw valley district, as also in Wisconsin, although to what extent has not been definitely settled, which makes an enormous shortage in the anticipated supply, and the lumber business therefore, so far as prices are concerned, may be considered more than ordinarily safe from fluctuation. The purchases already made for delivery next season also demonstrate beyond a peradventure the faith that dealers have in the stability of the market.

THE economy practiced in the saw mills hereabouts, says a Bay City, Mich., paper, excites the admiration of every observer. There seems to be no waste whatever. The dust as it falls from the saw passes on to the engine room where it is used for fuel. It is very valuable for this purpose. The edgings of the timber are generally used for filling dock property and worked up at the woodenware factories. The ends of the logs are sold for stove wood. Large edgings are turned into slabs which are piled up a short distance from the mill and used for fuel. In view of the remarkable faculty possessed by lumbering men of turning every portion of the logs to some account, the fact that large fortunes are made in the business excites no surprise.—*The Woodworker.*

THE Ottawa *Free Press* says:—E. B. Eddy fairly deserves the name of the most enterprising lumberman in the Ottawa Valley. Since the erection of his new premises he has had a complete electric fire alarm system (larger than the city of Ottawa's) put in operation, the stations of which cover every important point throughout the mills, factories and yards. The alarm bells are placed in the residences of the superintendent, foremen, etc., and also connected with the fire station. In addition to the above Mr. Eddy is now having his extensive establishments fully equipped with electric light thermostats for automatically and immediately giving notice of fire, even before any smoke or flame is visible. Mr. Eddy evidently realize the value of electricity and will have one of the best protected concerns in the country.

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Market Reports.

TORONTO.

From Our Own Correspondent.

OCT. 24.—Shipments by water are now rapidly drawing to a close. Owing to the low rates prevailing vessel men can not afford to pay sailors $2.50 per day and carry lumber te Oswego at $1.25 per M, so that after the end of this month most of the lumber crafts will tie up for the winter. The total shipments from our decks for the last two weeks amounts to 3,000,000 feet of lumber and 550,000 of shingles, and it is likely that as much more may get away before the winding up of navigation. The retail yards seem to be doing a fair trade, although the plasterers strike is having considerable effect in reducing the volume of trade. Architects offices are said to have plenty of work in prospective, and usually when this is the case some one of the building trades mar their prospects by a labor strike. If, as predicted by some, the coming winter should prove open and mild, considerable building will be carried on in this city.

It is now almost certain that the stock of logs to be got out this winter will be much smaller than usual, owing to the large quantity of lumber to be wintered over, Our banks are steadily refusing to advance mill men funds to any considerable extent, with which to stock up their mills, and it is devoutly to be hoped for that this policy on the part of the banks will be regularly adhered to, and, if so, the opening of the spring of 1884 will witness a much better state of things, to the ultimate advantage of all concerned.

The only article in the wood line that has money in it just now is cordwood. the price of which is advancing steadily after that of coal. Dealers are now offering as high as $5.50 per cord for good hardwood, on car, here, so that any persons holding any large quantity of good wood are likely to reap a golden harvest.

The charges mentioned in my last letter for shunting cars of lumber to the various sidings within the city limits are being rigidly enforced to the great annoyance of all the lumbermen concerned.

You will doubtless have noticed the last report made by N. & N. W. R. R. Co. showing their traffic receipts to have increased some $15,000, as compared with the same period of last year, but they have neglected to inform the public that this increase is mainly due to the increase in their passenger traffic, whereas, but for their folly in advancing the tariff on lumber to western points their receipts on that kind of traffic should have doubled itself during the past two years, the lumber trade having increased with western Ontario nearly double during that time—wisdom will come to them in due time.

Mill cull boards and scantling				$10 00
Shipping cull boards, promiscuous widths				14 00
"	stocks			14 00
Scantling and joist, up to 16 ft				14 00
"	"	"	18 ft	15 00
"	"	"	20 ft	15 50
"	"	"	22 ft	16 50
"	"	"	24 ft	17 50
"	"	"	26 ft	18 00
"	"	"	28 ft	19 00
"	"	"	30 ft	21 00
"	"	"	32 ft	22 00
"	"	"	34 ft	24 00@25 00
"	"	"	36 ft	27 00
"	"	"	38 ft	28 00
"	"	"	40 to 44 ft	32 00
Cutting up planks to dry				24 00
"	boards "			18 00
Sound dressing stocks				18 00
Picks Am. inspection				28 00@30 50
Three uppers, Am. inspection				35 00@45 50

B. M.

1½-inch flooring, dressed				32 00
1½	"	"	rough	16 00
1¼	"	"	dressed	26 00
1¼	"	"	undressed	15 00@16 00
1	"	"	dressed	22 00
1	"	"	undressed	16 00
⅞ Beaded Sheeting, dressed				22 50
Clapboarding, dressed				14 00
XXX sawn shingles, ℔ M				3 00
Sawn Lath				2 50

WINNIPEG.

The Winnipeg *Commercial* of Oct. 16, says: The demand for lumber continues brisk, and there will likely be a lively business done between now and Christmas. The quotations remain as follows:—Pine lumber, 1st, common boards, dressed, $26.50; 2nd, dressed, $25.50; 1st, do rough, $26.50; 2nd, do., $25.50; sheathing, rough, $25; timber, 16 feet and under, $24; do. over 16 feet, for each additional 2 feet, $1; dimension and joists 16 feet and under, $24; do. over 16 feet for each $1; fencing, $25; 2 and 3 inch batttens, $30: A. stock boards, all widths, $50; B. do., $45; C. de., $40; D. do., $35; 1st clear. 1, 1¼, 1½, and 2 in, $60; 2nd do. $56; window and door casings, $50; base boards, dressed, $50; 1st pine flooring, siding and ceiling $40; 2nd do $35; 3rd do., $30; ½ inch split siding, dressed, $30. Spruce lumber —timber 16 feet and under, $22; do. over 16 feet, for each additional 2 feet, $1; dimensions and joists, 16 feet and under, $23; do. over 16 feet, for each additional 2 feet, $1; boards, $22; 1st flooring, siding and ceiling, $28; XX shingles, $5.25; Star A shingles, $5.25; X shingles, $5.00; A do. $4.50; lath $4.50.

MONTREAL.

The Montreal *Gazette* of Oct. 19th, says:—The local market has been quiet during the week, but former prices are sustained. There is a good demand for hard wood for the American market, but supplies are not excessive here, and dealers, therefore, do not care to sell. Laths have again advanced 15c. being now up to $1.85 per thousand and are likely to go higher still, as they are very scarce.

QUEBEC.

The *Chronicle* of Oct. 12 says:—There seems to be no change for the better in this branch of business. Some more rafts have arrived, but the Quebec shippers seem to be well stocked for all present requirements, and are not inclined to purchase except at even lower rates than the present. We hear that 100,000 feet of choice St. Lawrence pine, of 18½ inches, changed hands at 32 cents. We hear of no other transactions this week.

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$53 00@55 00
Pine, fourths	48 00@50 00
Pine, selects	43 00@45 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 45
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@30 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	40 00@43 00
Pine, inch siding, common	12 00@15 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of Oct. 20, says:—The general market holds its own quite satisfactorily. There is a good, steady demand for supplies of white pine of all grades above common. Coarse and lower grade lumber, as a rule, is little wanted. Spruce and hemlock continue firm and in steady demand. Laths are as scarce as ever, and prices are high and stiff. Southern pine moves fairly at about previous prices. The best grades of cherry are in good request, and similar remarks apply in a less degree to ash and walnut. Our quotations are for car-load lots,

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of Oct. 20, says: The arrivals of lumber cargoes at this port during the past week have been less in number than during the week previous—namely, 218 this week and 265 last week. On Saturday 59 loads put in an appearance, and on Sunday 26, so that a big fleet was present at the sales docks, about 6,000,000 feet being afloat for the usual busy time on Monday and Tuesday. From Monday to Wednesday the wind helped the luggers away from port, but was unfavorable to those that sought to get in. The result has been to effectually clean out offerings, so that on Thursday morning there was nearly a bare market, and the winds still unfavorable to the incoming fleet. This state of things leaves the hookers nearly all over the lake loading, with the prospect that when the wind changes there will be another rush and a crowded market.

Though prices have been rather limber, and on dimension have wavered around the pivotal point of $9, the offerings have not been in such quantity as to cause an absolute glut and stagnation, though sales were somewhat slow the latter part of last week on account of an unusual fleet on Thursday. Cargoes have sold right along since Monday, the disposition of the commission men being sufficiently accommodating to start and keep up a movement. It is conceded by all that dimension has sagged a little in price, while No. 2 inch stuff has settled somewhat, in sympathy with dimension. The cause of this decline is apparent to all—too much coarse stuff is being offered in proportion to No. 1 lumber. The weakness of inch lumber pertains mainly to the poorer and less desirable qualities, and simply because dealers do not desire to continuously load up with it when they can not get good stock to sandwich in with the poor.

Really good cargoes are scarce, and any that give promise of turning out a fair percentage of selects and uppers are eagerly sought and well paid for.

Quotations are as follows:—

Short dimension, green	$ 9 00@ 9 75
Long dimension, green	10 00@11 00
Boards and strips—No. 2	10 50@12 50
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 00@ 2 20
Extra A	2 30@ 2 60
Lath	1 60@ 1 75

Receipts of lumber, shingles, etc., for the week ending Oct. 18, as reported by the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	Shingles
1883	56,267,000	27,785,000
1882	51,212,000	17,762,000

FROM JANUARY 1, 1883, TO OCTOBER 18, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	1,499,369,000	956,539,000
1882	1,724,271,000	703,781,000
Increase		252,758,000
Decrease	224,902,000	

STOCK ON HAND OCT. 1.

	1883.	1882.	1881.
Lumber	611,369,920	660,118,942	541,763,015
Shingles	381,042,939	265,189,150	241,445,200
Lath	54,038,772	52,267,802	38,333,925
Pickets	1,661,537	3,368,270	2,788,430
Cedar posts	349,493	161,719	211,048

OSWEGO, N. Y.

From Our Own Correspondent.

No change in quotations since last report. Receipts are still very light, nearly all arrivals now are of green lumber, the assortment is very good and the market well supplied. Receipts to date, 1883, 161,000,000; 1882, 81,000,000.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LONDON.

The *Timber Trades Journal* of Oct. 13 says:—The waney board at Wednesday's sale was in request at £5 5s. to £5 15s. a load, but the two lots of square pine went very low at 67s. 6d. and 72s. 6d. a load. Stocks of ash are large, which seemed to tell unfavourably on the sale of the parcel of Quebec ex *Brilliant*, without reserve, on Wednesday, but the dimensions were not very large. Amongst the deals spruce went low, and the old parcels of pine as well did not exhibit any improvement on previous prices.

The Miramichi pine ex *Atlantic*, without reserve, went cheap enough, best wide stuff 12 to 20 ft., 11 up to 16 inch board, being knocked down at £12; but the price did not appear to create any surprise, the wood being known to be of a very coarse nature. The 2nds, also broad, went at £10 10s., the planks, and deals falling at a little better than spruce prices.

We observe that several of the reserved lots were bid for, and these mostly were allowed to go at 5s. on the broker's quotations. Whether this is indicative of more activity in the demand, or is due to the low upset price the goods were offered at, we can hardly say, but we are inclined to think it is to the latter that the seeming readiness on the part of the room to buy the reserved lots may be attributed. We are afraid the turning point in prices has not yet arrived.

GLASGOW.

The *Timber Trades Journal* of Oct. 13 says:—The consumption during the quarter ending 30 September last shows great activity, being as nearly as can be computed as follows:—Quebec waney board-wood and yellow and red pine logs, 16,900 loads; Quebec oak logs, 1,800 loads; elm, 980 loads; birch (all sorts), 725 loads; pitch pine logs, hewn and sawn, about 13,000 loads.

Compared with corresponding quarter in 1882 these figures show an increase over all to the extent of about 9,000 loads. The stock of birch, it will be observed, is very low. This year has been quite exceptional as regards lower port birch, of which there has been hardly any arrivals. Any early import would bring good prices. The consumption of Quebec deals (all sorts) for the past three months amounts to about 2,000 St. Petersburg standards, and of lower port deals to 2,500 standard.

LIVERPOOL.

The *Timber Trades Journal* of Oct. 13 says:—We are still having a fair amount of timber-laden vessels on the arrival list, and these give the market no rest, for if a satisfactory price be not obtainable by private treaty, the goods are immediately put up for sale by auction, and forced off at the best price obtainable.

On Friday last, three auction sales were held by three different houses: at eleven o'clock in the morning by Messrs. Farnworth & Jardine, who offered 873 logs Nova Scotian birch timber and a few spruce deals; at twelve o'clock Messrs. A. F. & D. Mackay offered a parcel of St. John, N. B., spruce deals &c., and a cargo of Miramichi birch and pine timber, pine and spruce deals, &c.; followed by Messrs. Edward Chaloner & Co., offering a cargo of sawn pitch pine timber, planks. deals, &c.

SWEDEN.

The Stockholm correspondent of *Timber Trades Journal* writing on Oct. 6th, says:—Fall shipments from the north of Sweden are continuing reasonably moderate, although probably ample enough for the requirements of the English and French markets after the surfeit of goods sent forward to the countries named earlier in the season. One or two consignment shipments of sawn redwood to London by steamer are reported, but now that even steamer freights and insurances have risen, the chances of favorable auction realization are sufficiently remote to act as an effectual curb on ventures of this kind, notwithstanding the allurements held out to millowners by those whose interest it is to facilitate consignment business. I am therefore inclined to believe that the consignments now going forward are due to special circumstances, and this method of realizing Swedish sawn wood will only be resorted to in few cases this autumn. Planed wood, however, on the other hand, is being frequently shipped on consignment to London, even by the best firms,

one or two good marks being only obtainable there through the medium of the auction sales.

The statistical return of the Swedish wood export up to the end of August, 1883, as compared with the two preceding years for similar period, reads as follows, viz. :—

	1883.	1882.	1881.
Sawn and planed wood	548,805	475,816	339,685 stds.
Sq. & partly Sq. timber	9,599,160	11,287,313	7,946,325 c. ft

This return is deserving of the very greatest attention by both exporters here and importers on your side. At the end of August, for instance, it is reasonable to assume that the irregularities of the earlier months, caused by an earlier or late opening of the ports, and which impair the comparative value of the statistics, have been effaced, and that we can first then form a pretty shrewd guess, not only what the total export of the season will be, but also how great an advantage stocks imported earlier in the season may be expected to have over those of September and October. I wish here to except London, however, as it has been found an extremely imprudent thing to base business calculations on what the stocks there may be expected to be like even a month hence, Returning to the statistics we find that the excess of sawn and planed wood in 1873 over last year, which was 46,971 Petersburg standards at end of July, had jumped to 72,989 standards at the end of August: or, if we compare the present year with 1881, we are surprised to learn that the excess in 1883 of 165,266 standards up to 31st July had advanced at one leap to 209,-120 standards at close of August. These figures are illustrative of the enormous development of producing power called forth by two or three prosperous seasons. It speaks well for the vitality of the trade that, notwithstanding the enormous export both last year and this, prices have not fallen more than they have done. It may in any case be taken for granted that full stocks exist at the present time in consumers' hands, and that a continuation of the export in similar volume to this and 1882 will inevitably lead to a disorganization of the trade in spite of the somewhat improved aspect of the market at present.

THE GLASGOW TRADE.

Singleton, Dun & Co.'s timber circular, dated Glasgow, 4th October, says :—

Stocks are much heavier than was supposed, and to balance this it will be necessary that shipments during the remainder of the season be on a very restricted scale. In almost all the items of stock the import up to the present has been over an average, and when to this is added the extra imports from the north of Europe at exceedingly low rates, it will be seen that the market on the whole is very tender. The consumption has been very fair, but the cry is here as elsewhere, that "there is no money in the business." It is quite evident, that as regards Quebec goods, holders dread the extreme prices, and turn over what they have as rapidly as they can, profit or no profit,— and, as regards Baltic goods. the facility with which supplies can now be put in the market by steamers make it useless to "hold" large stocks, as the moment there is a prospect of a spring in anything, extra supplies are forthcoming to make up a suspected deficiency. There is no doubt that European goods are largely displacing Canadian, and what with this, and the wretchedly low prices for pitch pine, the prospects for Quebec goods are the reverse of promising. Our local industries are fairly employed, and the aggregate consumption of wood will be large during the coming winter.

Boardwood.—The stock is unusually large, and it should be noted of inferior quality to the usual average. Prime 20 in. average was placed at 2s 6d to 2s 7d. A parcel, really good, 45 feet average was sold at 2s 1½d, and a parcel 19 in., excellent wood, at 2s 5d per cubic foot. A parcel, fairish 21 in. average, went at 2s 5½d, and some 24x27 in average at 2s 7d to 2s 8d, while a parcel 28 feet and up, by about 24 in average, is offering at 2s 10d. Common qualities are very hard to move, and importers desire to quit these at best rates obtainable.

White Pine.—Deck plank wood—Sales of this were made at 2s 7d. to 2s 8d per c. foot for prime 55 to 60 feet average, and a lot of choice 70 feet average at 2s 11d per cubic foot. The stock of prime deck plank wood is small however. Good fair average is most difficult to move, and importers decline now to contract for such. Joisting was sold at, for 35 feet average, 18d to 19d, and for 45 feet average 19d. A parcel of good 40 feet average brought 19d, and a line of 75 cubic feet average realized only 19d. It is most difficult (almost impossible) to obtain prices to cover cost of this wood, consumers finding it easy to get other cheaper woods substituted, and only when sellers are induced to accept low rates will white pine be taken. The stock, however, is not very large, and if quantities are not greatly increased, present rates should be sustained.

Red Pine.—The stock is moderate; but rates do not improve. It is quite hopeless to realize prices to cover Quebec quotations so long as European goods and pitch pine are so abundant and cheap. For 30 feet average 12½d to to 13½d was taken, and for 40 feet average 15d to 16d per cubic foot.

Deals—1st pine—The demand is only for wide and long. Oddments are seldom asked for. Parcels were sold at from 2s 3d to 2s 11d, and an entire parcel, all under 11 in., at 2s 6d per cubic foot. 2nd Pine—Demand very slow. 3rd Pine—For 12 to 16 ft. 11 x 3, price is from 13d to 14d.—chiefly 13½. A nice parcel, all 10 to 11 x9 and 11x3, recently landed, was cleared at 12d 12½d. Broad deals are worth 15d to 17d per cubic foot, according to specification. At Greenock some parcels were sold at 11½d. 4th Pine—At Greenock several parcels were sold at 9½d to 10d. At Glasgow a small parcel was sold at 11d, and a parcel 12 in. and up at 13d.

THE AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett & Co.'s latest report, dated Melbourne, August 27th, says :—Since last issue the deliveries from the storeyards have been below the average of several months past, and we do not look for any improvement in this respect during next month. Dealers report a fair town trade, but a considerable falling off in the demand for up-country. American lumber.—Sales, ex Scottish Prince, Emily F. Whitney, Coriolanus, and Freeman. Michigan clear pine realized 1¼, 1½, 2, 2½, 4 in., good quality, £17 to £17 2s. 6d. ; inferior, 1¼, 2 in., £14 7s. 6d. to £15; 12x1, 14x1, 16x1 dressed clear pine, £16 to £16 2s. 6d. ; w. p. shelving, 12, 14, 16 in,, £11 7s. 6d. to £12 10s., according to quality ; Canada clear pine, 1¼, 1½, 2 in., good, £14 17s. 6d. to £15 5s. ; 1¼, 2 in., inferior, £12 15s. to £13 7s. 6d. per M. feet super. Prices on the whole show an advance on last month's rates. The trade hold moderate stocks, and prices are likely to continue firm.

Messrs. C. S. Ross & Co. say :—We have to report a fair amount of business since last issue, but owing to a falling off in the demand for consumption and heavy arrivals, prices generally are lower. The arrivals of flooring boards have been excessive, and as importers show no inclination to hold, prices are declining. A fair average business is reported for consumption ; but as money is dearer with a tendency to harden, the building operations of the colony will not be so large as last year. The arrivals for past four weeks have been the Ben Cruachan, Loch Sloy, Lock Long, City of Agra, Holmsdale, Arisides, Crofton Hall, Macduff, Gulf of Carpentaria, Gulf of St. Vincent, Respigadera, Pathan, Newcomen, Aristomene, Leddington, and Amalfi from United Kingdom, with red deals, flooring, laths, &c. ; Sumarlide, from Fredrikstad ; Broderene and Union, from Laurvig, with flooring ; Freeman, from Boston, with spruce deals, t. and g. ceiling, clear pine, &c.

The Ottawa *Free Press* of Oct. 20th, says :—Chaudiere and other saw mills in this district are still running regularly. Night watches in some of them have been discontinued. The market remains quiet, a steady business being done. No more lumber will be carried over this winter than last, and although all the stock yards will be well filled, as usual, most of the stock is disposed of. As regards the prospects in the woods, it is said that the quantity to be taken out this winter will be only about one-third the quantity taken out last season.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec :

Oct. 11.—J. K. Ward, pine, &c., St. Lawrence Docks.

McArthur Bros., staves, New London cove.

D. D. Calvin & Co., oak, &c., sundry coves.

David Moore, white pine, &c., Cap Rouge.

Collins Bay Co., oak, &c., Sharples' cove.

Cook Bros., white pine, St. Michael's cove.

Oct. 18.—S. A. Julien, deals, Commercial wharf.

John McRae & Co., staves, Indian Cove west.

Ross Brothers, deals, Bridgewater cove.

Simon Wyle, staves, Woodfield cove.

McArthur Bros., deals, Levis.

D. D. Calvin & Co., oak, &c., sundry coves.

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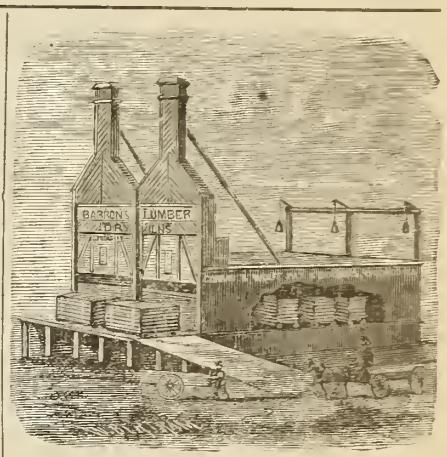

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WOODEN COLUMNS.

A series of experiments have been conducted on the testing machine at the Watertown arsenal by Prof. Lanza, of the department of mechanical instruction of the institute of technology. The object in view was to ascertain the strength of wooden columns of the size and length commonly used in the construction of cotton and woollen mills. The experiments were made at the instance of the Boston Manufacturers' Fire Insurance Company, of which Edward Atkinson is president. This testing machine was recognized as an invention of the greatest importance in the bestowal through a committee of experts, of the gold medal, the highest award of the recent mechanics' fair. Although it has been for some time in operation for scientific and other tests, it gains through this fact a new interest for the public. A part of the columns thus tested were yellow or hard pine, and a part oak. About a dozen so far have been subjected to the process of compression in the machine, the strain having been brought upon them endwise for the purpose of ascertaining what is called the "crushing strength" of the timber. Outside of these experiments and a few others at Watertown, none have been made on wooden columns of sufficient size to furnish reliable data for practice. The experiments made elsewhere, and those on which the formula in textbooks are based, have been upon columns of about two inches on a side and of four or five feet in length. From the results thus reached the strength of columns of dimensions actually used in buildings has been computed. It is plain that a series of experiments conducted under the direction of experts, and by them authoritively recorded will constitute much more satisfactory data for the text-books. The experiments, therefore, have a significance beyond the nowise unimportant one that pertains to them in the matter of mill construction. All but two of the columns exporimented on were round hollow columns, of from eight to oleven inches diameter, the two being about nine inches square. The greatest amount of pressure exerted in any case was about 250,000 pounds. The tests have disclosed frequent instances of defective boring in the columns. The object in boring is to open an air passage through the heart of the stick for the prevention of dry rot after it is in position in the building. It is essential, of course, that the bore should extend from end to end, but this has not always been effected. The sticks were bored first from one end then from the other, and the borings have sometimes failed to meet in the middle of the stick. The tests also show that to taper the sticks is a mistake, inasmuch as it weakens the column more than hasheretofore been estimated. Reasons for exercising more caution in other respects in the construction and adjustment of wooden columns in building having also been disclosed.—*Boston Advertiser.*

CANADIAN SHIPMENT TO LONDON.

The *Timber Trades Journal* of Oct, 6, says: The arrivals this year from Quebec are somewhat in excess of those of last year, so that if the increase in yarded stocks had been even more marked, it would not have been a matter of surprise. There were between the 1st of January and the 4th of October, 1882, 28 cargoes from Quebec, 19 from Montreal, and five from Saguenay. This year to similar date, Quebec supplied 32 cargoes, Montreal 23, and Saguenay only 1. On the whole the difference is only slightly in favor of the present season.

From the spruce ports the present year is also more prolific in tonnage and brings the stocks up considerably in excess of those of 1882, though the shipments this year up to the present time are by no means inordinately large.

There are more spruce deals in stock now than this time twelvemonth by 80,041 pieces, and battens of this description are already 67,703 or so over and above what were in stock at similar date last year, ends are also more by 7,756 pieces.

The arrivals last year up to the 4th October were: Miramichi 5, Halifax 2; St. John 3, and Betsiamitz, 3; altogether 13, against ten cargoes come forward up to the present time from the ports named.

The Canadian shipments, including the spruce cargoes with the pine, give a preponderance for 1883, as against the year before. The difference in favor of the present year being, as stated, all made up of spruce shipments.

WALNUT IN VIRGINIA.

A correspondent to the *Tradesman*, Chattanooga, Tenn., writes as follows concerning the lumber interest at Pocahontas, Va.: Two large firms are engaged in the lumber business here, their operations being at present confined to the walnut trade. Some days as many as 100 waggons come to this place loaded with walnut logs and lumber. Recently, one of these huge logs which came in measured 1,000 feet of lumber, and is worth about $85. Twelve thousand dollars worth of logs have been sent off in a single week. The representatives of the Tazewell Lumber Company says that they have bought enough walnut lumber in Tazewell to keep 10 teams running for 25 year to haul it to Graham. The other firm, J. M. Thomas & Co., has sold and has on the ground 1,600,000 feet. It sells to a Baltimore firm, which ships the pick of the stock direct to Amsterdam and Bremen. The rate of depletion will soon exhaust the walnut, but there remains almost untouched millions upon millions of oak, hemlock, ash, pine, hickory, cherry and other woods, which will make this a centre for lumbermen for years to come, as it is the natural trading point for six counties, three in Virginia—Tazewell, Bland and Russell—and three in West Virginia—Monroe, McDowell and Wyoming.

Summer Frosts and Tree Planting.

The following appears in the *Globe*:—The visit of Messrs. Gordon and Payne to the North-West will, no doubt, be the means of adding very largely to our present stock of information in regard to the North-West climate. Lieut. Gorden, in conversation with a *Globe* reportor, said that summer frosts were not uncommon in some parts of the North-West, but how far they would interfere with wheat culture was impossible yet to say. In the Far West, he thought many of them might be prevented by the planting of whole townships in forest. Such plantations would furnish a screen of vapour over and around them for some distance, which would check the excessive radiation of heat into space which now occurs in clear weather as soon as the sun goes down. The forests would alone repay their cost by furnishing supplies of wood to the railways and to settlers.

At East Wilton, Me., a large amount of birch lumber is annually shipped to Scotland for spool making. Large quantities of boards are also shipped from that point to South America and places in this country.

The claim of the Keewatin lumber company to the island in the Lake of the Woods has been relinquished. The Dominion government has entered into arrangements with the company to grant them certain additional timber limits on Clearwater and Ptarmigan bays, in order to secure their lease to the islands to facilitate mining operations.

The elm trade between Ontario and the United States is growing in importance. There are large tracts of low lands in western Ontario, covered principally with elm. Of late years the demand for hoops and staves has prompted the conversion of this elm into cooper stock, and numerous stave and hoop mills have been started, and considerable capital invested in the business.—*The Woodworker.*

Several of the Michigan lumberman have declared that unless the existing extra rate of 20 cents per thousand feet for transporting logs, charged by the Michigan Central road, is removed, they will not put in any more logs by rail, claiming they can be floated more cheaply.

It is now asserted that the box shook business did not originate in Bangor, Maine, but that the first shooks ever manufactured by the process now in vogue were cut out in Dexter, on a machine invented by Reuben Flanders, and which machine has for many years cut out on an average one hundred thousand boxes per annum and is still running in the old mill.

An Abandoned Vessel Saved.

The *Timber Trades Journal* of Oct. 6, says: On Wednesday week the mate and three seamen of the Familien Minde, a Norwegian vessel, took into Newport a derelict Portuguese vessel named Poren Amelia, which they had picked up off the banks of Newfoundland on the 26th August. She was loaded with timber, and during a gale the master and his son were washed overboard. The crew then abandoned her. The vessel and cargo will prove a valuable prize for the sailors. The Familien Minde arrived in the Thames on Tuesday, and as she was coming up the river the mate of the Portuguese vessel, who had been brought on by the barque after having abandoned his vessel, tied a grindstone to his neck and jumped overboard. It is supposed that he committed suicide to avoid the consequence of having abandoned his ship.

Lake Winnipeg and Bearings River,

Mr. Alexander McKay, of Ottawa, Ont., recently made a trip from Winnipeg, Manitoba, to Lake Winnipeg and vicinity, to investigate the situation. He was interested personally to the extent of the ownership of a 50-mile limit on Bearings river. A gentleman who accompanied Mr. McKay says regarding the Lake Winnipeg and Bearings river district, that there is considerable spruce and comparatively little pine there, and none of any size. The Bearings river is very rough, and the rapids are very numerous, though not to such an extent as to seriously interfere with log-driving. The cost of operating will be considerable, but the lumber business, it is supposed, will pay reasonably well.—*Northwestern Lumberman.*

New Iron Frame Gang Mill.

The William Hamilton Manufacturing Company of Peterborough are now engaged in constructing an Iron Gang Frame for the mill now in course of erections for Messrs. Cook Bros., Serpent River Georgian Bay. This gang is largely the personal design of Mr. Wm. Hamilton, and when completed will weigh over twenty tons. We shall give our readers a full discription of it ere long.

The *Timber Trades Journal* says:—Another illustration of the extreme old age to which wooden vessels survive is that of a smack of 37 tons register, named the John and Samuel, which is now discharging old iron at Greenock. She is 121 years old, having been built in London in 1762. This little craft, which is one of the oldest merchant vessels afloat, seems in fairly good trim.

The London *Timber Trades Journal* says:—There appears to be a considerable movement in the spruce market, which, in company with Baltic whitewood, has remained in a very dull state for the most of the season, and now, as the shipping season is practically over, the importers in Liverpool and elsewhere are able to form a moderately accurate estimate of the quantities that will have to be dealt with.

The Ottawa correspondent of the *Globe* under the date of Oct. 17th, says:—"Mr. J. B. Tackaberry sold by public auction to-day the following timber limits on the Georgian Bay, belonging to James McLaren and others:—Limit 48 sold for $20,000 to Thomas Kenney, and also limit 56 for $36,000; limit 63 to James Worthington for $24,500; limit 64 to Thomas Kenney for $5,200; limit 72 to James Worthington for $15,000. The sale in all amounted to $110,000."

Tried in Toronto.—Mrs. Mary Thompson, of Toronto, reports the removal of eight feet of tape-worm by the use of one bottle of Dr. Low's Pleasant Worm Syrup. This medicine is reliable for all kinds of worms that afflict children or adults.

A Common Annoyance.—Many people suffer from distressing attacks of sick headache, nausea, and other bilious troubles, who might easily be cured by Burdock Blood Bitters. It cured Lottie Howard, of Buffalo, N. Y., of this complaint and she praises it highly.

Caution.—We advise all who are afflicted with a cough or cold to beware of opiates and all medicines that smother and check a cough suddenly, as serious results surely follow. Hagyard's Pectoral Balsam loosens and breaks up coughs and colds in a safe and effectual manner.

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LUMBER MERCHANTS

And MANUFACTURERS,

Dealers in WALNUT, BUTTERNUT, CHERRY, CHESTNUT, ASH, OAK, WHITEWOOD, and all kinds of Hardwood and Pine Lumber. PICTURE BACKING, HOLLY, EBONY, LIGNUM-VITÆ, RED CEDAR, &c. American and French VENEERS.

Orders for Lumber and all kinds of Factory Work promptly attended to. Lumber Kiln dried to order.

Yard: Cor. Wellington & Strachan Aves.

Factory: Corner Soho and Phœbe Streets.

Office: 39 Adelaide Street East, (First Floor, nearly opposite the Post Office.

L5 TORONTO, ONT. 1y

How Many Miles Do You Drive!

The

ODOMETER

Will Tell.

This instrument is no larger than a watch. It tells the exact number of miles driven to the 1-100th part of a mile; counts up to 1,000 miles; water and dust tight; always in order; saves horses from being over-driven; is easily attached to the wheel of a **Buggy, Carriage, Sulky, Waggon, Road Cart, Sulky Plough, Reaper, Mower,** or other vehicle. Invaluable to Liverymen, Pleasure Drivers, Physicians, Farmers, Surveyors, Draymen, Expressmen, Stage Owners, &c. Price only **$5.00** each, one-third the price of any other Odometer. When ordering give diameter of the wheel. Sent by mail on receipt of price, post paid. Address

McDONNELL ODOMETER CO.,

2 North La Salle St., Chicago.

Send for Circular. 16L10

$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address True & Co., Augusta, Maine.

Health is Wealth.

Dr. E. C. West's Nerve and Brain Treatment, a guaranteed specific for Hysteria, Dizziness, Convulsions, Fits, Nervous Neuralgia, Headache, Nervous Prostration caused by the use of alcohol or tobacco, Wakefulness, Mental Depression, Softening of the Brain, resulting in Insanity and leading to misery decay and death, Premature Old Age, and Spermatorrhœa, caused by over-exertion of the brain, self-abuses or over-indulgence. One box will cure recent cases. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by us for six boxes, accompanied with five dollars, we will send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued only by ORMOND & WALSH, sole authorized Agents for Peterborough, Ont. JOHN C. WEST & CO., Sole Proprietors, Toronto

Dr. FOWLER'S

EXTRACT OF WILD

STRAWBERRY

CURES

CHOLERA

CHOLERA INFANTUM

DIARRHŒA,

AND

ALL SUMMER COMPLAINTS

SOLD BY ALL DEALERS.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills
L7tf

Established 1874.

Established 1874.

NORMAN'S ELECTRO CURATIVE APPLIANCES

RELEIVE AND CURE

Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat nd Chest Complaints, Neuralgia, Bronchitis, Incipient Pralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

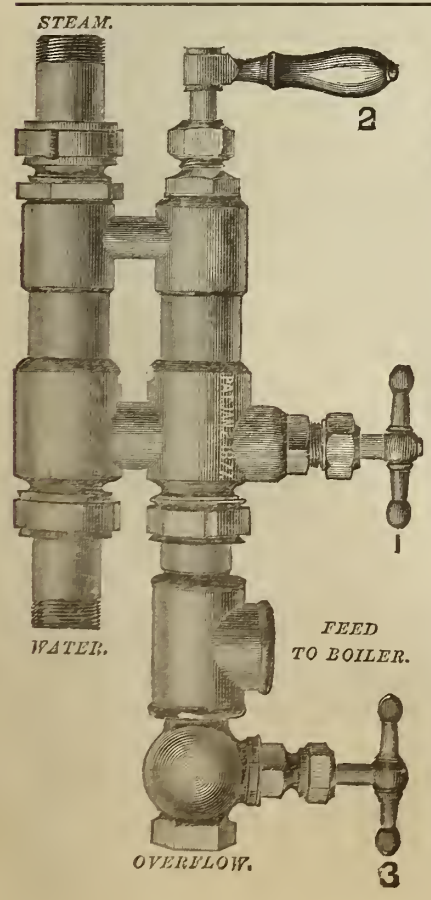
Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1yL7



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Hancock Inspirator

The Best Feed known for Stationery, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

Over 50,000 Now in Use.

MANUFACTURED BY THE

Hancock Inspirator Co'y

5 CUSTOM HOUSE SQUARE,

MONTREAL, P.Q., CANADA.

Manufacturers of Inspirators, Ejectors, and General Jet Apparatus.

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MONTREAL AXE WORKS

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St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

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J. S. MAYO

IMPORTER AND MANUFACTURER OF

MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES.

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H. R. IVES & CO.

Hardware and Stove Manufacturers

AND FOUNDERS.

No. 2 Portable Forges.
Boring Machines.
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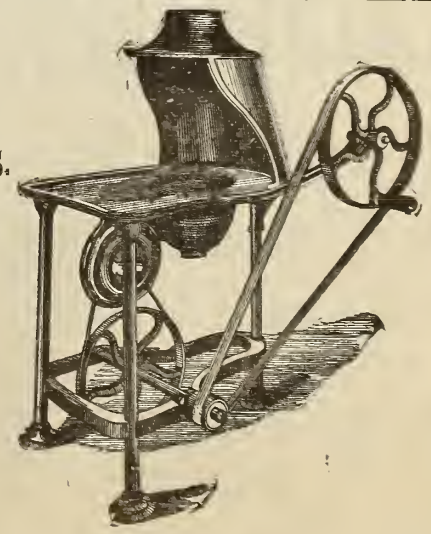

Anvils and Vice Combined.
Blacksmith Drills
Tuyere Irons.
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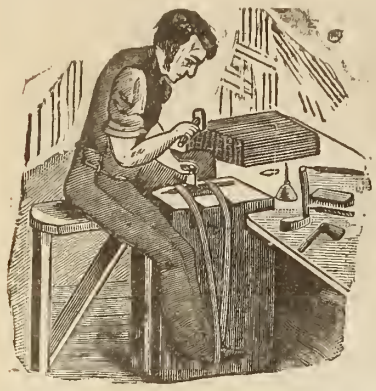
&c., &c.

MONTREAL, P.Q.

☞SEND FOR CIRCULAR AND PRICES. 2L20



THOS. GRAHAM & Co.,

File Manufacturers

ETC.,

150 FRONT STREET EAST

TORONTO.

FILES FOR SALE. FILES RE-CUT

F. E. DIXON & CO.

MANUFACTURERS OF

STAR RIVET

LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL.

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses, &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

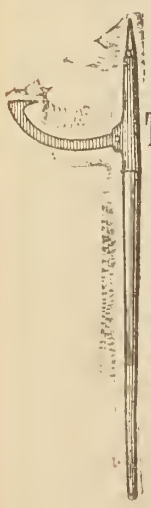
AND AGENT FOR 1yl.21

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

ROBERTSON'S

LIGHTNING CANT DOG

STEEL RING.



The Lightest, Cheapest and Most Durable CANT DOG in the World.

PETER ROBERTSON,

Chaudiere, - Ottawa.

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GRATEFUL—COMFORTING.

EPPS'S COCOA

BREAKFAST.

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*

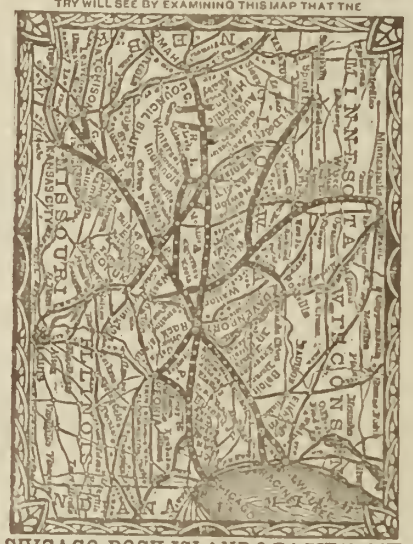
Made simply with boiling water or milk. Sold in tins only (¼-lb. and lb.) by Grocers, labelled thus:

JAMES EPPS & Co., Homœopathic Chemists,
1yl21 London, England.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

A MAN

WHO IS UNACQUAINTED WITH THE GEOGRAPHY OF THIS COUNTRY WILL SEE BY EXAMINING THIS MAP THAT THE



CHICAGO, ROCK ISLAND & PACIFIC R'Y

By the central position of its line, connects the East and the West by the shortest route, and carries passengers, without change of cars, between Chicago and Kansas City, Council Bluffs, Leavenworth, Atchison, Minneapolis and St. Paul. It connects in Union Depots with all the principal lines of road between the Atlantic and the Pacific Oceans. Its equipment is unrivaled and magnificent, being composed of Most Comfortable and Beautiful Day Coaches, Magnificent Horton Reclining Chair Cars, Pullman's Prettiest Palace Sleeping Cars, and the Best Line of Dining Cars in the World. Three Trains between Chicago and Missouri River Points. Two Trains between Chicago and Minneapolis and St. Paul, via the Famous

"ALBERT LEA ROUTE."

A New and Direct Line, via Seneca and Kankakee, has recently been opened between Richmond, Norfolk, Newport News, Chattanooga, Atlanta, Augusta, Nashville, Louisville, Lexington, Cincinnati, Indianapolis and Lafayette, and Omaha, Minneapolis and St. Paul and intermediate points.

All Through Passengers Travel on Fast Express Trains.

Tickets for sale at all principal Ticket Offices in the United States and Canada.

Baggage checked through and rates of fare always as low as competitors that offer less advantages.

For detailed information, get the Maps and Folders of the

GREAT ROCK ISLAND ROUTE,

At your nearest Ticket Office, or address

R. R. CABLE, Vice-Pres. & Gen'l M'g'r. E. ST. JOHN, Gen'l Tkt. & Pass. Ag't.

CHICAGO.

Burdock BLOOD BITTERS

READY MADE HOUSES.

We have before referred to the large business carried on in some sections of the country by the manufacturing of ready made houses. A correspondent of the *Old Colony Memorial* paid a visit not long ago to Fairfield, Me., where a large establishment is located for the production of these knock down houses, and he says that few have any idea to what extent this business has been carried in Waterville and its neighborhood, or to what perfection it has been brought. In the establishment to which we refer dwelling houses are made, like boots and shoes, in any quantity, and of any size or style, and for any market in the wide world. Not long since this concern received a single order for 50 houses for Cape May, to be delivered speedily and in complete finish.

These houses were to be not sheds or shanties but regularly ordered dwellings; and they were made accordingly and so delivered, and contain hundreds of occupants at this moment. An order will be received for a $50,000 hotel, or an ornate, French roof cottage, for a fine country estate, and these as easily and expeditiously furnished as an ordinary boarding house for a country village, or a barn for a ranch in Kansas or Colorado. Do not suppose that only a coarse, rough frame is thus sent out, to be trimmed into shape on the spot where it is delivered! On the contrary, the house is complete when it leaves the factory, and as ready to go together as is a musket when it leaves the armory at Springfield, all the parts being found, even to the knobs for the doors, and the screens and shades for the doors and windows, according to specifications. Great trains of freight cars stand waiting about, and are freighted almost daily here. The refuse trimmings and edge cuttings of the lumber are carted off to a neighboring pulp mill, and there speedily turned into material for paper or other products. Machinery for almost every conceivable use in connection with wood is at hand, and house materials of any kind or size or shape, seem to drop out like meal from a hopper. In a recent instance where a large building was furnished for a southern order, the parts were thus made, and when put together in the city where the building is now standing the length of the latter was found to vary not the eighth of an inch from the original specifications, although its length on the front numbered hundred of feet Every inch of this building, from the sill to the last shingle, was sent ready prepared from this factory, and "set up" as readily and almost as quickly as a nail cask.

On the Line of the C. P. R

The Thunder Bay *Sentinel* gives the following classified list of the saw mills along the lines of the C. P. R. They are as follows:—

Owner.	*Location.*	*Cutting capacity per day ft.*
Winnipeg Lumber Co..... ..	Winnipeg....	90,000
Brown & Rutherford..... ...	Winnipeg....	18,000
D. E. Sprague.....	Winnipeg....	40,000
J. R. Sutherland & Co.....St. Boniface....		155,000
Carney & Watson.....	Emerson....	20,000
R. A. Balfour,.....	Emerson....	25,000
E. M. Birnison.....	Cross Lake....	4,000
John Ross.....	Whitemouth....	10,000
Dick & Banning.....	Keewatin....	50,000
F. T. Bulmer & Co.....	Keewatin...	15,000
John Mather.....	Keewatin....	100,000
Rainy Lumber Co.....	Rat Portage ...	200,000
F. T. Bulmer & Co....	Rat Portage ...	50,000
Algoma Lumber Co.....	Fort William....	40,000
Thunder Bay Lumber Co.....Port Arthur....		60,000
Jarrett Bros.....	Port Arthur....	20,000
Shields & Co.....	...Brandon...	40,000
Northwest Lumber Co	Selkirk....	40,000
W. A. Smith.....	Portage la Prairie....	3,000
W. P. Smith	Portage la Prairie....	10,000

Falling Leaves.

"There is something inexpressibly touching in the fallen leaves," sighs an esteemed author. There is, there is, indeed. It's when you slip on one of the articles on a wet morning, and touch the unsympathetic pavement. But there is in reality touching language—language uttered from the heart, yes, from the depths of the soul, in the many thousands of testimonials and letters (unsolicited) that come from those who once were sufferers from lung diseases, asthma and consumption, and who have used N. H. Downs' Vegetable Balsamic Elixir, and have been restored to their wonted health and activity.

The William Hamilton Manufacturing Co'y

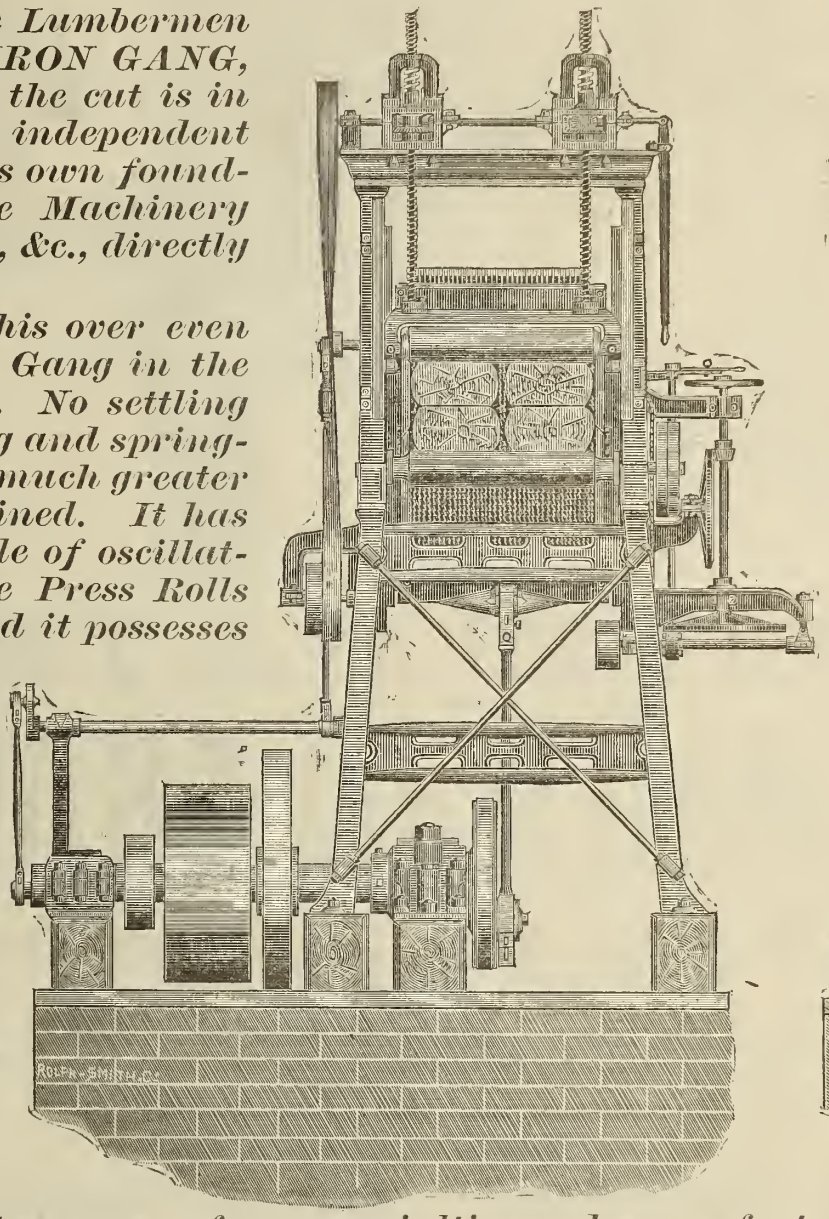
MANUFACTURERS OF (LIMITED,)

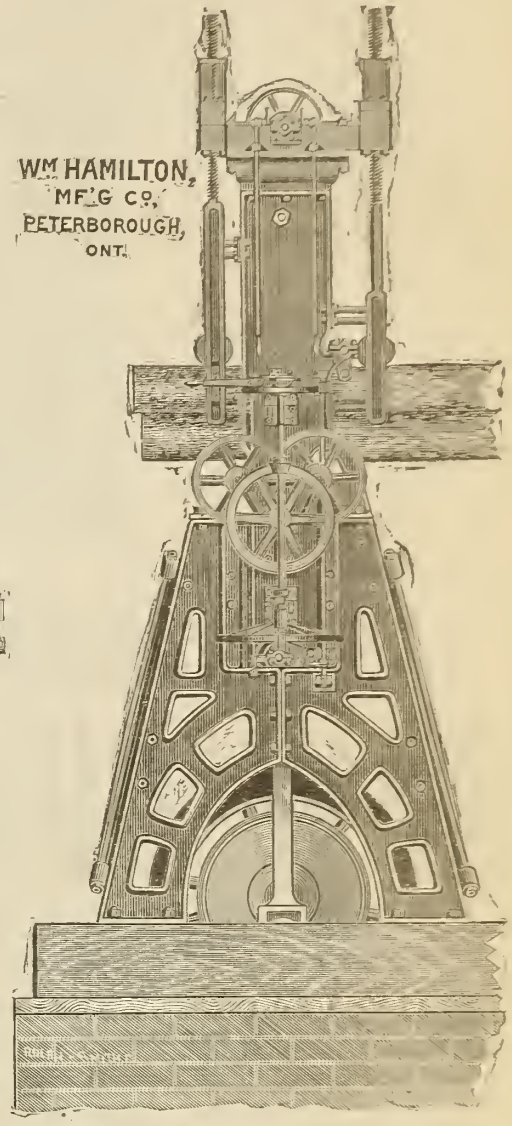
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

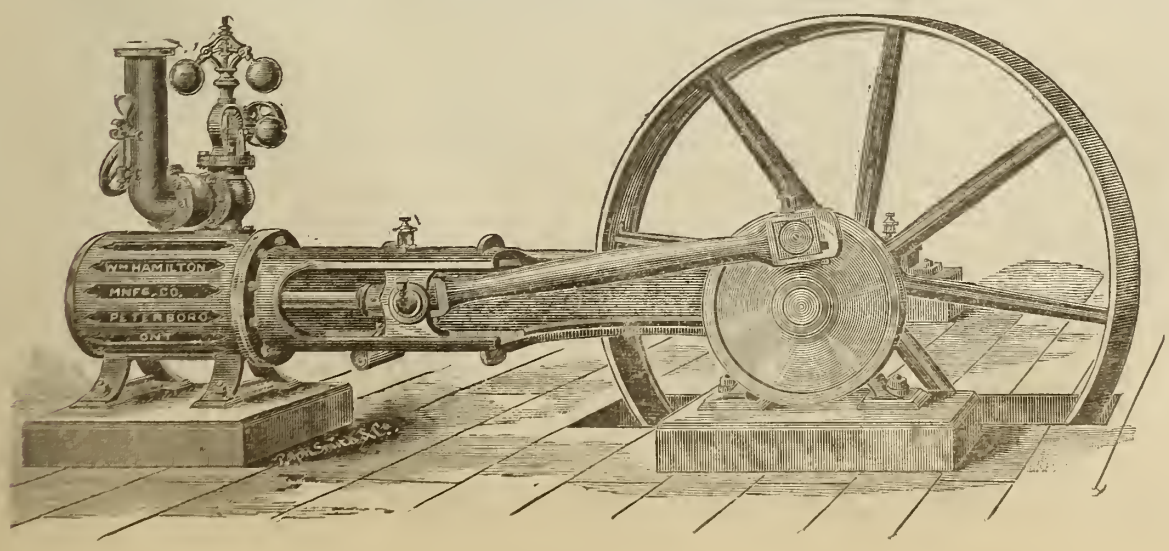




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



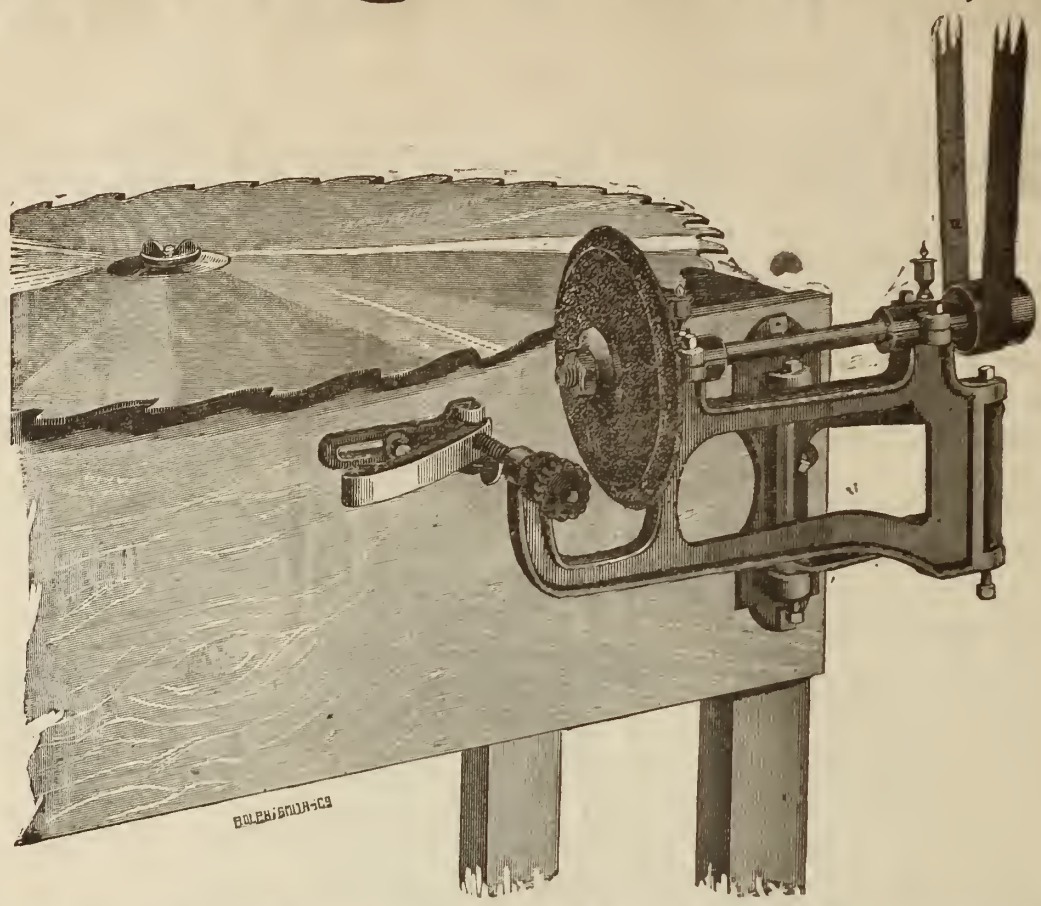
This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

Lumbering Season, 1884

Won't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

ROGERS' PATENT

SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensibles in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONEN PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURER AND MINERS' GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 3. PETERBOROUGH, ONT., NOVEMBER 15, 1883. NO. 22.

THE Sandy River Lumber Company, o Maine, is shipping dimension and hardwood in large volumne, to Cuba and South America.

A fire at the cove of Messrs. Benson Bros. New Liverpool, destroyed from $5,000 to $8,000 worth of deals. The loss is covered by insurance. But for good fire appliances the loss would have been $100,00 to $150,000.

THE saw mill of Smith & Sons at Turtle Mountain, is being reorganized with a probability of new members. This has been, excepting the loss by fire last winter, which was a severe one. a prosperous affair as well as a boom to the settlers.

MR. GIBSON, the lumber king of New Brunswick, has, this season, according to a St. John paper, shipped from St. John 87,000,000 feet of deals, in 115 vessels, for the English and French markets. Last season his total shipments reached 100,000 feet in 136 vessels.

CHICAGO is the greatest lumber market in the world. The single item of sawed lumber received there in 1881 would lay an inch flooring fourteen feet wide round the earth at the equator. The amount of lumber manufactured in the three states of Michigan, Wisconsin and Minnesota during 1881 would lay such a floor fifty feet wide.

WASHINGTON has for several years been expending about $20,000 annually in planting, propagating, and the care of shade trees, and in consequence is credited with being the best shaded city in the world, not even excepting Paris. The total length of the shade furnished by these trees is 125 miles, many of the sidewalks being covered by a complete arch of foliage.

THE Ottawa *Free Press* of Oct. 27th says:—Messrs. Flatt & Bradley, large lumber dealers of Hamilton, yesterday purchased 5,357 acres of heavy wooded land at Cessellman, part of the Cessellman estate, for the sum of $135,000, and will immediately commence extensive lumber operations. Mr. J. J. Flatt, the senior member of the firm, is now here, and will commence at once to erect two large saw mills and a large general store on the property.

THE Ottawa *Free Press* says that Eddy's new planing mill and box factory are running in full force now. One hundred and fifty men will receive employment winter and summer by this new addition to Eddy's enterprises. The boxes are shipped principally to Montreal and American points where they are in great demand. One million feet, board measure, are turned into boxes every week, and this already enormous figure is likely to be increased.

SALE OF LIMITS.

The Ottawa *Citizen* of Oct. 29th says:—An extensive sale of valuable timber limits, comprising an area of 150 square miles, took place in the Grand Union Hotel, on Saturday afternoon last. The sale was by public auction and conducted by Captain R. C. W. McCusig. The limits in question were:

No. 4—First range, block A, in the Province of Quebec, described in the license thereof, as follows:—

To commence at a point where the line dividing the ranges 1 and 2, block A intersects the east shore of the head waters of Lake des Quinze, being due east from No. 10 mile post, planted on the boundary line between the Provinces of Ontario and Quebec; thence following the said range line east astronomically 3½ miles; thence south astronomically 13 miles to Lake des Quinze to the point of beginning. Not to interfere with prior licenses existing or to be renewed in virtue of regulations on the 16th day of October, 1880.

No. 4, Second Range, said block A—To commence at a point where the east line of berth 3, 2nd range, block A, intersects the north limit line of limit granted to Mr. John Poupore, thence following the said line of limit No. 3, due north 11 miles; thence east astronomically 5 miles; thence south astronomically 10 miles; thence due west to Lakes des Quinze 3½ miles; thence on the west shore of Lakes des Quinze, from a post planted by P. L. S., C. I. Bouchette, due west to the point of beginning, about ½ mile. Not to interfere with prior licenses existing or to be renewed in virtue of regulations on the 16th day of October, 1880.

No. 9, Second Range, Block A—To commence at a point on the southeast corner of berth No. 8, 2nd range block A; thence following the east limit line of said berth No. 9, due north 10 miles; thence east astronomically 5 miles; thence south astronomically 10 miles to the range line, and thence west astronomically to 5 miles to the point of beginning. Not to interfere with prior license existing, or to be renewed in virtue of the regulations on the 16th day of October, 1880.

The property, it would seem, was first purchased from the Government by Mr. David Moore, and afterwards sold by him to the late Mr. Taggart for the sum of $40,000, subject to a heavy mortgage, only a small portion comparatively being paid at the time of transfer. Since the death of Mr. Taggart the mortgage was foreclosed and the property in consequence brought to the hammer. They did not realize as much as it was thought they would, owing to three causes. In the first place it has been a dull season in many ways with most lumbermen; secondly, the terms of sale were pretty stiff, and lastly, the season of the year was not the best to put them in the market. Nevertheless, the sale attracted considerable attention, and there were at it many of the best known lumbermen of the district as well as other parties connected with the trade, amongst whom were Messrs. C. Edwards, A. W. Fleck, J. R. Booth, D. Miller, McCormick, E. Moore, James Skead, David Moore, Roach, T. Smith, Lambert, S. McDougal, J. Mohr, J. Rlopelle, Wm. Stubbs, C. Smith, R. Nagle, E. Bonson, P. Thompson E. Griffin, John Poupore, Assa Gordon, J. R. Fleming, R. Klock, B. Cutler, James McLaren, H. Bronson and others. As before stated the terms of the sale were considered stiff, the property being sold en block, one half to be cash, and paper satisfactory to the vendor to be paid in three months. After Captain McCuaig had made all facts known bidding began. $10,000 was the first offer made followed by $15,000 and swiftly in succession bids to $28,000 at $1,000 a bid. Here they seemed to hang fire, but crept up slowly $1,000 at a time to what the auctioneer considered to be a bid of $38,000 from Mr. Lambert to whom he knocked them down. Mr. Lambert said there was some mistake about the matter as he had not made the bid.

Captain McCuaig then fell back on the next highest bid which was that of Mr. W. C. Edwards, $37,000 who accepted the offer. It was generally conceded by competent judges present that the purchaser had got a good bargain, and that nothing but a lightness of funds among the trade just now prevented their bringing a far higher price. Some of those well qualified to say said in conversation that $1,000 per mil would not be too great a price for them.

FORESTRY EXHIBITION.

Mr. Wm. Little, Secretary of the Forestry Association here, has just received from Mr. William H. Rider, the Official London agent of the International Forestry Exhibition to be held in Edinburgh next year, papers containing particulars of the projected exhibition. The list of the officers is a long and influential one. The Marquis of Lothian heads the list as President, and after him come eight dukes, six marquises, and any number of earls, viscounts, lords and barons. The Honorary Secretaries are Messrs. Robert Hutchinson, J. N. Menzies, H. Cleghorn and William Skinner, of Edinburgh, with Mr. George Cadell as Secretary. It is proposed to open the exhibition in August, and entries will be received until march, 1884. The exhibition is intended to include everything connected with and illustrative of the Forestry products of the world, and will be open to exhibitors from all countries. Special railway terms will be granted, and it is expected that the governments of the different countries exhibiting will lend their aid to make the exhibit the finest ever yet seen. Class 1 will be devoted to practical forestry and will include forest implements, models of huts, charcoal kilns, timber, slips, &c.; plans of river embankments and rafts; machinery for transplanting trees and transporting timber; saw mills and wood working machinery, and fencing materials of all kinds, including gates and stiles. Class 2 will be devoted to forest produce, raw and manufactured, such as collections of timber specimens; pavements, barrels, basket work, wood engravings, bamboos, tanning and dyeing substances, barks, corks, fibre, materials for paper, gums, resins, wood oils, charcoal for gunpowder, peat, cones, seeds and fruits. In class 3 scientific forestry is treated of. There will be displayed botanical specimens of forest *flora*, microscopic sections of woods, parasites and edible fungi, forest *fauna* injurious to woods; representations of forest entomology, various processes for preserving woods and fossil plants. Class 4 is taken up with ornamental forestry such as ornamental trees, rustic work and dried specimens. Illustrative forestry will be treated of in class 5. In this department will be exposed to view paintings and photographs of remarkable trees, delineations showing the effect of blight, accidents or any abnormal condition, sketches of practical works and operations in the forest. Class six will comprise forest literature of all kinds—reports, periodicals, manuels, treatises, charts, maps, book-keeping, etc. In class 7 will be exhibited essays and reports on forestry. Class 8 will be devoted to the loan collections. Class 9 to the economic condition of foresters and woodmen, and in class 10 will be placed the miscellaneous articles not included above.

The exhibition promises to be a remarkle one, and it is confidently expected that the Dominion Government will take a strong interest in the matter.—*Montreal Star.*

Forestry in Ontario.

Mr. Phipps is pushing his forestry work, as we see by the notices of newspapers in different localities where he pays flying visits. We hear of him week before last on the Blue mountains in Grey; last week we observe he was down at Leslie's large nurseries for a couple of days; this week he is going. as we see by the News, through the Niagara district, examining everywhere the methods and success of tree planting and other matters connected with forestry in the sections he passes through. Farmers will find some valuable experiences detailed in his next report.—*Toronto Report.*

Burnham Beeches.

An autograph letter of Lord Beaconsfield to Mr. Francis George Heath is prefixed to a new edition of his handbook to Burnham Beeches, in which the author of "Lothair," having mentioned that he passed part of his youth in the shade of Burnham Beeches. added, "I am not surprised that the ancients worshipped trees. Lakes and mountains, however glorious, in time weary. Sylvan scenery, never palls."

CANADIAN FORESTS.

The annual meeting of the Forestry Association of the Province of Quebec was held in the Forestry Chambers, St. James street, Montreal, on Thursday evening Nov. 8. The President, Hon. H. G. Joly, occupied the chair, and among those presont were Messrs. J. X. Perrault, J. K. Ward, G. L. Marler, William Little, Wm. McGibbon, G. W. Stephens, M. P. P., J. C. Chapais, Dr. Painchaud, J. C. Robillard, J. A. N. Provencher,—Leclerc, and others.

The Secretary, Mr. J. X. Perrault, read the minutes of the last annual meeting, which were confirmed.

The President, in presenting his annual report, said he would make his remarks as brief as possible, as they had in the room some fine specimens of tree culture, which had been grown by Mr. Wm. McGibbon, who would favor the meeting with some interesting particulars concerning them. He then read his annual report as follows:—

GENTLEMEN,—This Association was founded in October of last year. We have had no meeting since then, as it would have been difficult to collect our members, scattered as they are all over the Province, but when we parted, we all knew what each one of us had to do, and we can show some work.

This first year of our existence has been a good year for us and one of unexpected success, but has been darkened by the loss of a dear and valued friend, our Honorary President, Mr. James Little. He died full of years, knowing that the seed sown by his hand so many years ago, in what then appeared a hard and ungrateful soil, had sprung up at last, and bid fair to ripen and bear fruit bountifully, seeng that his warnings had awakened the country at last and that the danger of total destruction to our forests, first pointed out by him, had been admitted by the thinking men of this continent.

I will now briefly sum up the work of the year, merely reminding you, beforehand, that our association has no funds, or next to it, and that it relies on the personal exertions of its members for doing the work that the association has in view, planting trees as each member undertakes to plant or sow twenty-five forest trees every year.

We have been well supported by the Hon. W. Lynch, the Commissioner of Crown Lands; he has thrown himself, heart and soul, into the work, and we are deeply indebted to him, not only for the success of our first "Arbor Day," but for the introduction, in our Legislature, of laws which have for their object the carrying out of the views expressed by the American Forestry Congress and by us, for the protection of forests against fire and waste, and for the classification of public land in such a manner that settlements should be encouraged on the lands best fitted for agriculture, and that lands only fit for the growth of timber, and especially pine, should be reserved for that purpose, as long as it does not interfere with colonization.

Our first "Arbor Day" has been an unexpected success, not only in the large cities, like Montreal and Quebec, but especially in many of the country parishes, where it was most wanted, and where the clergy were most zealous in encouraging the people, in many cases setting the example by planting trees with their own hands.

The Council of Public Instruction are equally entitled to our gratitude for the way in which they have encouraged the observation of "Arbor Day" in all educational establishments under their control,

It will be a satisfaction for you to know that the news of the first "Arbor Day" in the Province of Quebec has reached such distant countries as Algeria, and that the example set by us is likely to be followed there.

In the absence of reports from all the different localities it is impossible for me to say how many forest trees have been sown or planted in the province by the members of our Association and by the people at large, on "Arbor Day." I hope we shall be able to devise means for securing all those reports for another year, and for publishing a summary of them, if not the whole. For the present we must rest satisfied with the reports that will be made here by the members of the general committee.

In the meantime I can take upon myself to state that many thousands of forest trees have been planted or sown since our meeting last autumn. There is one tree, however, upon which I can speak with a good deal of certainty; it is the *ash-leaved maple* (acer negundo, or box-elder or erable a giguieres.) During the last twelve or thirteen months from four to five hundred thousand seeds of that tree must have been sown in the Province of Quebec. I come to that conclusion from the number of pounds of seed that have been sold during that time, as reported to me by those who most largely deal in that article.

The extraordinary rapidity of growth of the ash leaved maple, the shortness of the time required before it can produce sugar (and thereby replace the old sugar orchards of the past) have acted as a wonderful stimulant on the minds of our people and done more for forestry than anything else could have done. In growing that tree people will learn how easy it is to grow forest trees; they will naturally take to the cultivation of more valuable trees, such as black walnut, butternut, elm, oak, ash, pine, spruce, tamarac, &c., according to the nature of the soil and other circumstances.

I think we can look, if not with pride, at least without shame, on the results of our first year's work; we have certainly got something to show for our money, twelve dollars—total reciepts, up to date.

You have doubtless heard that it is proposed to hold, next year, an International Forestry Exhibition at Edinburgh. I hope you will take this important matter into consideration this evening, as it is one in which we, as a Forestry Association, and the whole Dominion, are deeply interested.

We are particularly indebted to our Corresponding Secretary, Mr. E. Barnard, who has gratituously conducted for us a most extensive correspondence, notwithstanding the numerous calls from various sources upon his time.

Mr. J.X. Perreault, our Recordiug-Secretary, is also entitled to our thanks and so is our Treasurer, Mr. M. G. L. Marler whose plain and lucid financial expose must give you general satifaction.

The hall in which we are now meeting has been kindly placed at our disposal by Mr. Wm. Little, who has even gone to the trouble and expense of providing seats and getting the gas fixtures put up, to-day, and I now tender him our best thanks.

We must not forget the gentlemen of the press; they have considered our work as deserving of their support, they have given it to us in the most hearty and disinterested manner; the best way of showing our gratitude for their help in the past, is by deserving it in the future.

The whole respectfully submitted,

H. G. JOLY,
President.

After a long and interesteresting discussion. in which the Hon. W. W. Lynch, Commissioner of Crown Lands, took part, a motion to adopt the report was carried.

Hon. Mr. Lynch moved, seconded by Mr. J. K. Ward,

That the members of the Forestry Association of the Province of Quebec have heard with sorrow of the death of Mr. James Little, the Hon. President of the Association.

That his name will never be forgotten by those who take an interest in forestry, and that, as years go on in their course, the wisdom of his opinions and warnings will become every day more apparent.

That we heartily sympathize with the wife, who has been the companion of his life for so many years, and with his children in their sorrow.

That a copy of these resolutions be transmitted to Mrs James Little.

Carried.

Mr. Wm. Little briefly returned thanks for the kind resolution, and the President also bore testimony to the valuable work done by the late Mr. Little in the cause of forestry.

On motions of Mr. G. W. Stephens it was resolved that the old officers be all re-elected, as follows:—

Presidcut—Hon, H. G. Joly.

Vice-Presidents—Messrs. J. K. Ward and L. H, Massue, M. P.

Recording-Secretary—Mr. J. X. Perrault.

Corresponding Secretary—Mr. E. A. Barnard.

Treasurer—Mr. G. L. Marler.

The council was composed of sixteen members and the general committee of one hundred and ten members, and the President and Secretary were authorized to fill any vacancies caused by death.

It was moved by Mr. Wm. Little, seconded by Mr. G. L. Marler and resolved,

That a committee be appointed to memorialize His Excellency the Governor-General on the subject of the forests of the country, with the view of having a parliamentary enquiry made into their condition, especially with reference the white pine, respecting which it is said there is now a growing scarcity of the merchantable or first quality pine, a description of wood on which the prosperity of the country has greatly depended.

That the Chairman be requested to name the Committee, who shall be authorized to make what representations, enquiries or suggestions that to them may seem requisite in the premises.

The President appointed the following gentlemen as a committee:—Messrs. Wm. Little, L. H. Massue, M. P., J. K, Ward, J. X. Perrault and G. L. Marler.

On motion of the President, it was unanimously resolved:

That in view of the proposed International Exhibition, to be held in Edinburgh in 1884, respecting which full particulars have been received by the Association from the Executive Committee of this Exhibition, and the success thereof fully assured, this Association would respectfully urge upon the Government of Canada the great importance of having the Dominion represented at this International Forestry Exhibition by as full and complete an exhibit as possible of our Canadian woods, forest products, and the articles referred to in the circulars of the Exhibition Committee, and would further urge that such assistance be given to all contributors from Canada having articles of merit to exhibit who desire to compete for prizes as to enable them to do so

Considering how much the forests and the industries connected therewith have contributed to the prosperity of the country, it is to be hoped that such action may be taken by the Government as to make the Canadian exhibit worthy of the prominent position Canada occupies as a producer of forest products.

The President appointed as a committee, Messrs. Chapais, Little, Ward, Marler and Perrault.

On motion of Mr. Marler the meeting adjourned to meet again at the call of the President.—*Montreal Gazette.*

TREE CULTURE.

The fine hall of *La Patrie* office, on St. Gabriel street, Montreal, was filled to overflowing on the evening of November, 8th, on the occasion of a lecture by the Hon. H. G. Joly, M. P. P., on the subject "Is it wise to encourage the culture of trees in our Province." Mr. C. A. Geoffrion occupied the chair and among those present were Hon. Mr. Mercier, M. P. P,, Hon. Senator Thibaudeau, Ald. James McShane, M. P. P., G. W. Stephens, M. P. P., J. K. Ward, Joseph Doutre, Q. C., J. C. Robillard, D. Barry, J. E. Robidoux, Ald. Beausoleil, H. Dorion and Dumont. The chairman, in introducing the lecturer, dwelt upon the enterprise of Mr. Beaugrand in introducing such a course of lectures, which he was sure would prove very interesting.

Hon. Mr, Joly, in commencing his lecture, dwelt upon the great importance of this subject to the Dominion of Canada and especially to the Province of Quebec. There were two great objects that should be kept in view in this matter—first, to protect the existing forests, and secoudly, to cultivate new ones. The Provincial Legislature had already recognized the importance of the subject, and had adopted special legislation in regard to it. Its great importance would be seen when the fact was known that in the Province of Quebec our forests constituted one of the principal sources of revenue. He spoke of the devastation of the forests by fire and the means that had been taken to prevent their further destruction. He considered it was their duty to amply provide against the destruction of their forests. In the past the trees of the forests had been regarded as common prey, and every man's hands was against them until the ravages had become terrible. This, however, was gradually ceasing, and the people were recognizing the importance of their forests. He next spoke of tree cultivation, and advocated its promotion on a more extensive scale. There was nothing of very great difficulty in the cultivation of forest trees. France had seen the necessity of it, and thousands of trees had been planted. What had been done there could be done here. There was nothing that could be done with as little risk and with such a sure guarantee of profit. It should be started on a small scale and gradually worked up. He spoke of the different conditions of soil suitable for tree cultivation, and the ground adapted to each tree, and advocated the cultivation of the more valuable species of wood, alluding especially to black walnut, which would yield a very large profit. He considered however, that profit was not the one thing to be considered in this matter. They had a duty to perform to posterity, and they should perform it. Some would say that it was for the Government to carry out the work and not for individuals. The life of the individual, it might be contended, was too short to trouble with such matters. But the life of the Government was just as short. (Laughter and applause.) He referred to the services that the Hon. Mr. Lynch, Minister of Crown Lands, had rendered in the direction of tree cultivation, and spoke of the introduction of "Arbor Day," which had been attended with such success. This success should encourage them to make future efforts in this direction. The Province of Quebec, he was of opinion, had reason to be proud of the progress it had already made in the matter of tree cultivation. He had received communications from other countries inquiring what they had done, which showed that their actions were watched with great interest. He was in favor of having tree culture made a branch of the education of the youth of the land, as by this means an interest would be taken by the rising generation in this important matter.

Mr. H. Beaugrand proposed a vote of thanks to Hon. Mr. Joly for his interesting discourse, and said it was an encouraging sign when a gentleman with so much to attend to as Mr. Joly, took an interest in this subject.

The motion was carried amid great applause.

The Hon. Mr, Mercier, who was loudly called for, responded by saying that he had listened to the lecture with the greatest pleasure. Mr. Joly had praised the Government for the steps they had taken in the matter; but the real credit belonged to Mr. Joly himself, who had never ceased to press upon the Government the importance of the matter, and as usual the Government was forced to carry out the ideas of the Liberals. He congratulated Mr. Joly upon the success that had attended his efforts, and expressed the hope that the course of lectures inaugurated this evening would be eminently successful.

Messrs. Joseph Dontre, Q. C., and A. Buies also made a few remarks and a successful meeting was then brought to a termination.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., wil send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

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A GOOD INTRODUCTION.—J. Kennedy, a merchant in Dixie, about three years ago introduced Hagyard's Pectoral Balsam to his customers by trying it in his own family for Coughs and Colds. Being pleased with results, large sales followed, and it is now the favorite remedy in that neighbourhood.

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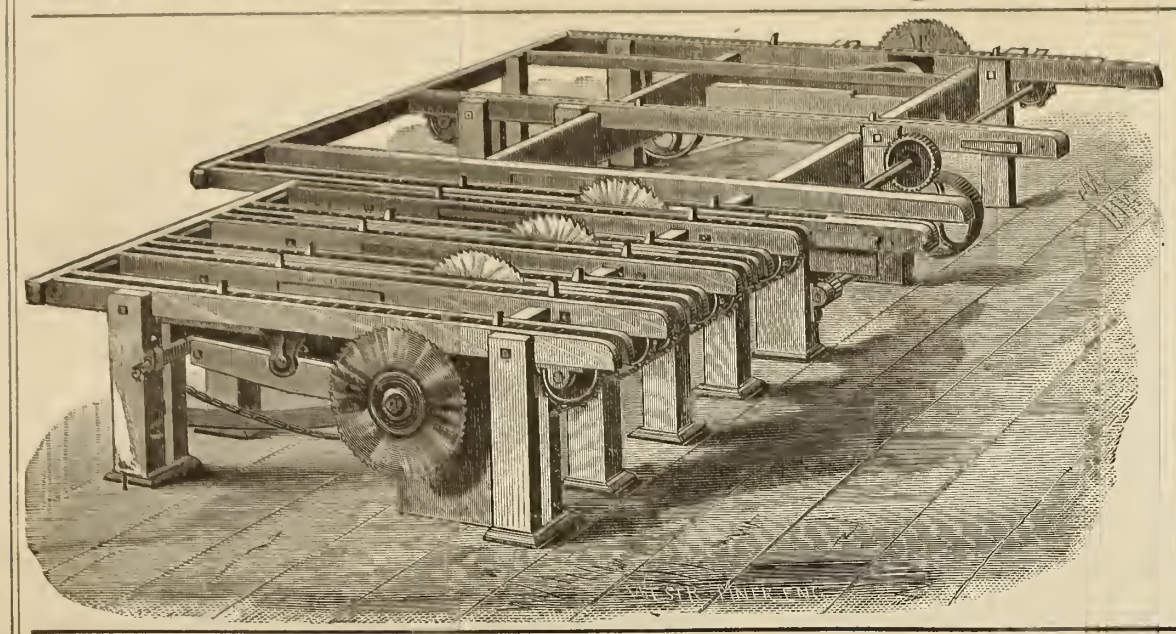

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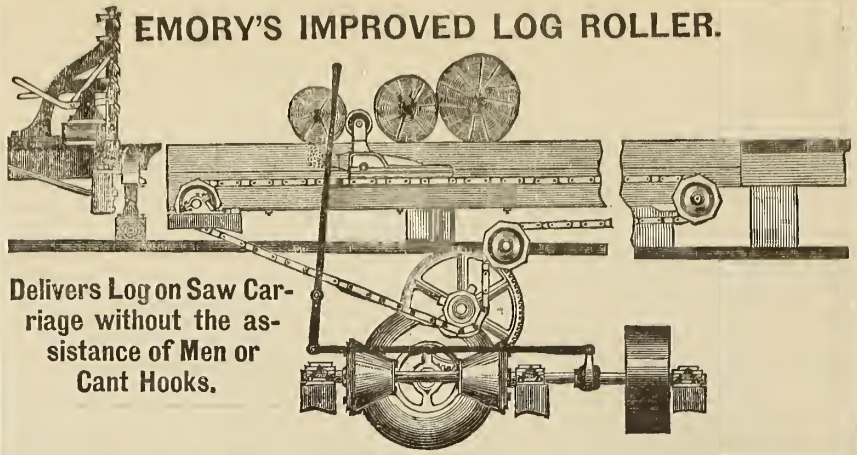

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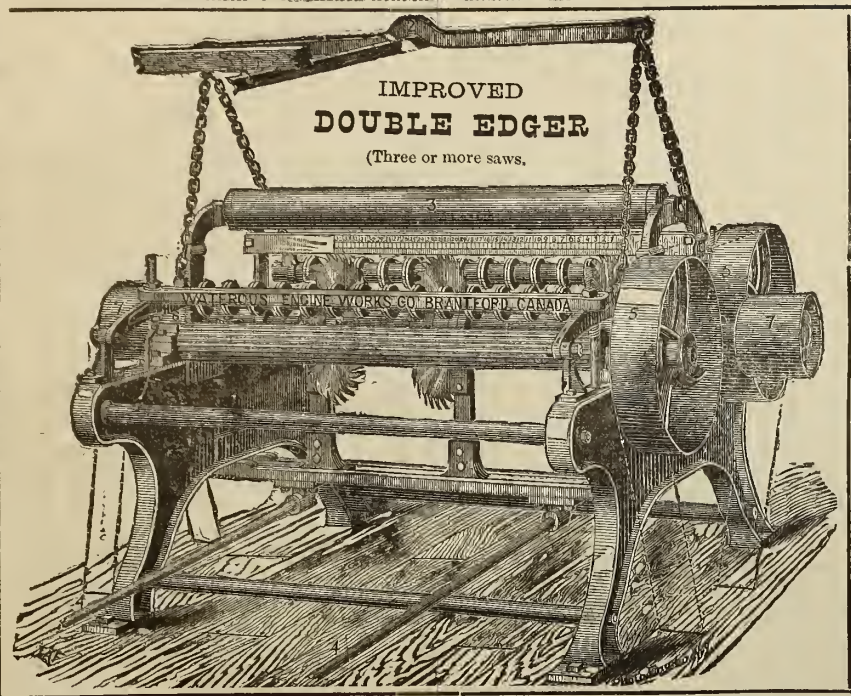

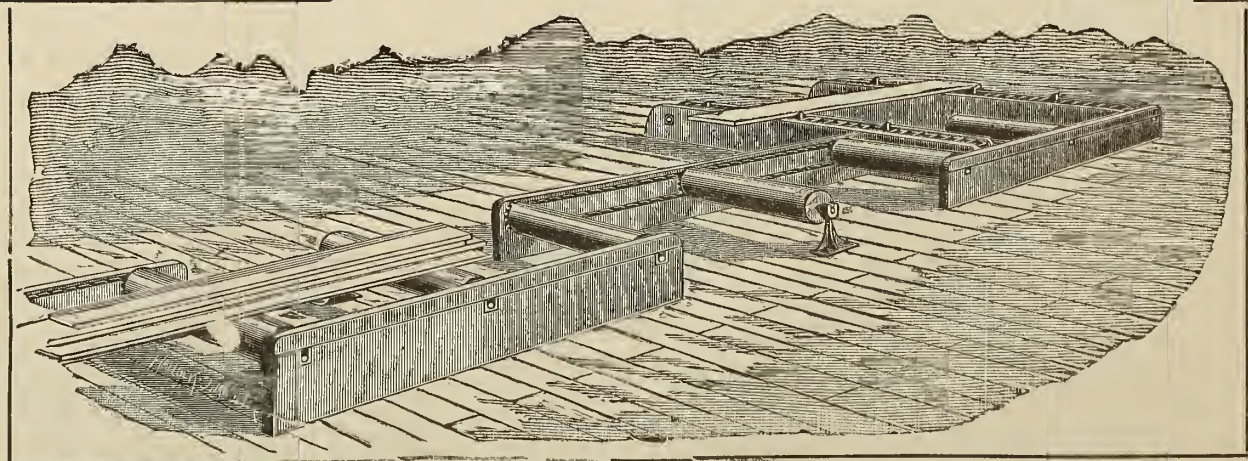

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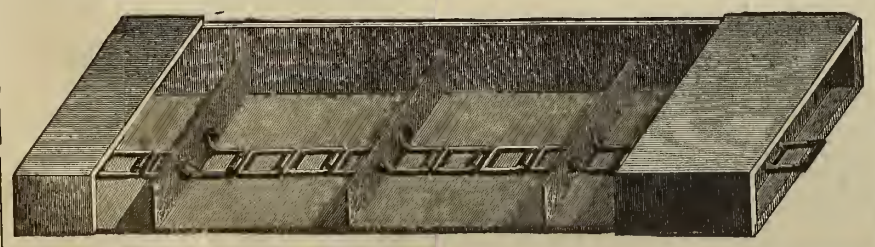

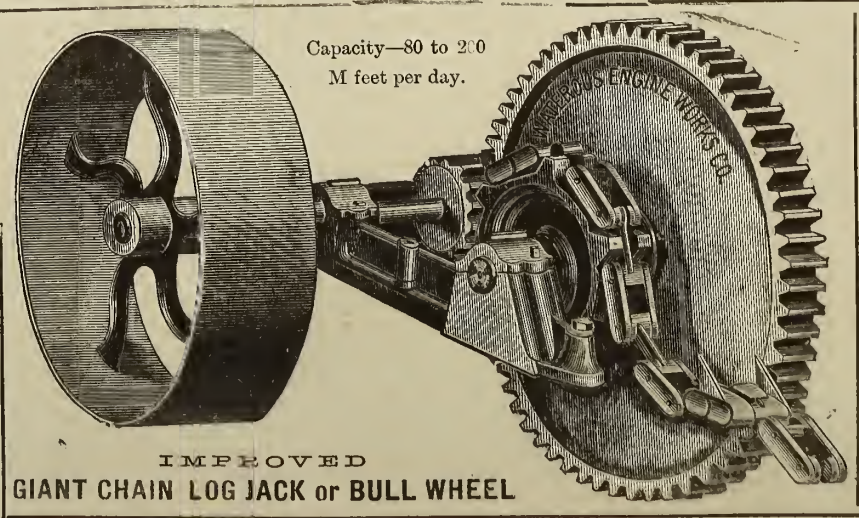

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WOOD IN BRITAIN.

By the British Board of Trade Returns for September, it appears that the import of timber and lumber into the United Kingdom at the end of September exceeded that of the same date last year considerably, leaving the stock on hand some 73,726 loads greater. The figures for the nine months are: wood, to end September, 1883, 4,717,000 loads, hewn and sawn, value £11,731,000, being an increased import, accordiug to tho *Economist*, of 1·5 per cent. in quantity and 1·6 per cent. in value over the corresponding period of last year. The supply from Russia, Sweden and Norway was smaller this September than the one before, both in hewn and sawn wood, but from British America the quantity sent forward to the old country was more than doubled. "Canada, in the face of its threatened scarcity, has managed to spare us," says the *Timber Trades Journal* of 13th inst., "100,000 more loads in a single month than came thence last year at the same period; and, whatever price was paid for it, the value of the wood is lower in this country now than it was then. Spruce, the staple of the lower ports, is comparatively a drug in Liverpool now, as the demand is stated by our correspondent to be quite inadequate to the quantities injudiciously thrown upon that market. There has seldom been, we are told, any deficiency of transatlantic timber in Liverpool since steam has taken up the carrying trade and rendered it to a great extent independent of the winds." The journal considers that "our North American colonies had not contributed so large a quota in excess of their usual figures in September, there would have been a smaller importation last month than in the same month last year. The alleged shutting down of their saw-mills does not appear to have been decided upon a day too soon."

It appears that the import of pitch pine fell off during September. The United States sent that month 47,000 loads less than in the like month last year, which is some offset to the excess import of pine from Canada. The decline in Baltic timber shipments accelerated the demand for pitch pine, according to the London market report of the 12th instant.

The official figures of wood imports into the United Kingdom were as follows for the nine months ended 30th September of this and year:

	Quantity.	
Timber (hewn).	*1882.* *Loads.*	*1883.* *Loads.*
Russia	227,702	224,624
Sweden and Norway	494,108	470,893
Germany	224,992	264,031
United States	140,648	95,471
British India	30,664	36,660
British North America	151,187	211,767
Other countries	266,982	286,886
Total	1,536,283	1,590,314
Timber, (sawn or split planed or dressed).		
Russia	920,110	797,657
Sweden and Norway	1,271,281	1,285,520
British North America	623,542	765,693
Other countries	289,486	278,244
Total	3,107,419	3,127,114
Staves (all sizes)	94,967	102,600
Mahogany (tons)	21,675	33,996
Total hewn & sawn	4,643,702	4,717,428

Wo fiud the statement in the St. John *Telegraph* that operations in the woods of northern New Brunswick are to be decidedly curtailed during the coming winter, so that a comparatively light export may be anticipated for 1884. In view of what is said above a step in this direction is needed.

The shipments of lumber to the 12th October this year on the Miramichi, compared with same date last year, wore as follows:—

	1883.	1882.
Deals	104,333,165 spl. ft.	85,922,315
Scantling	4,794,926 "	3,485,824
Ends	5,275,333 "	4,100,944
Boards	4,265,843 "	1,959,932
Total spl.ft.	118,669,267	95,478,015

Sales in London up to the 11th ult, were slow, and although an improved tone was observable, yet it did not preceptibly affect prices. Good pine, however, brought very fair figures. Waney board brought £5 5s to £5 15s per load. some square pine went as low as £3 7s 6d to £3 12s 6d. Miramichi pine, best stuff, 12 to 20 ft. and 11 to 16 inches being sold without reserve at £12; with £10 10s for seconds. The wood, however, is described as being of a very coarse nature.

At Liverpool, on Friday 5th and Wednesday the 10th insts., auction sales had been made of Nova Scotia birch timber 34 inch and up deep at 23½ per foot, down to 13d, for under 15 inch. St. John spruce deals up to 27 feet, 3x11, brought £7. Hull report mentions the receipt of 17 tons of furniture wood from New York.

Accounts from the Clyde ports are that the consumption during the quarter ending 30th of September last, shows great activity, being about as follows; Quebec waney boardwood and yellow and red pine logs, 16,900 loads; Quebec oak logs, 1,800 loads; elm 980 loads; birch (all sorts), 725 loads; pitch pine logs, hewn and sawn, about 13,000 loads. Compared with like quarter in 1882 an increase is here shown to the extent of 9,000 loads. The stock of birch is very low, not much having roached there from lower ports.—*Monetary Times.*

A SIGNIFICANT WARNING.

WASHINGTON, October 18.— The Northwest Lumberman's Association, becoming alarmed at the rapid depletion of the forests of the Northwestern States, and at the falling lumber market, has resolved that the cutting of timber must be curtailed. Mr. William Little, of Montreal, who was actively engaged before Congress last winter during the discussion of the tariff on lumber, has contributed to an English magazine, just received here, an interesting article upon the alarming destruction of American forests. After quoting from the census reports of the United States to prove that, at the present rate of destruction, the entire white pine of the Northwost will be exhausted within seven or eight years; and from the report prepared by H. G. Joly, late Premier of the Province of Quebec, for the Dominion Council of Agriculture, in which it is shown that the supposed enormous territory of Canada is really confined to a comparatively small area, and that the best lumber is yearly becoming less accessible to the markets, Mr. Little continues:

"It has often been said that there would be found a substitute for wood; if so, it is quite time the discoverer brought it forward, for up to the prsent tho 'everlasting Yankee' has not even touched tho subject. Notwithstanding the fences of wire, the use of iron in building, the terracotta and straw lumber, the consumption of our old friend wooden lumber increased nearly 50 per cent. in the ten years from 1870 to 1880, the former being 12,755,543,000 and the latter 18,091, 356,000 feet. . . And yet we are informed that we are within seven years of the time when the supplies of white pine and spruce lumber must cease. . . . The value of the lumber now produced in the north exceeds $300,000,000 a year as it falls from the saw, and to replace it would cost from two to three times this sum, even if the same lumber could be obtained elsewhere, which it cannot be, and $600,000,000 a year would not replace it; so that in a very short time this section of the country, instead of having a great and profitable industry advancing and helping every interest will be called upon to pay out hunreds of millions of dollars annually for such material."

It has been estimated, says the writer, that it would take the entire sailing tonnage of the world to convey the amount of timber annually consumed in America from any foreign lumber port. But whore to get it at any price in the enormous quantities used in this country is a question that would puzzle those best informed on the subject to determine. Mr. Little commends the policy of the Province of Quebec in restricting the cutting of pine trees to those which measure more than twelve inches through at the butt, and in charging the same timber dues upon the small logs as on the larger ones, which has had the effect of curtailing the cutting of the small pine and spruce trees in that prominco.

With respect to forest fires, which are made an excuso for the ruthless destruction of the timber of the country, he says they are largely duc to the practice of leaving the branches, tops, and other refusal of the timber to become dry, and thus food for fires. As a remedy he suggests that if the timber-laden owner would annually spend the same percentage he is will ing to expend in insuring other property of like value toward putting his timber property in safe condition, he could so place it that it would be difficult to set it on fire so as to do any serious injury.

Returning to the annual product of sawn wood in the Northwest, and the increase in valne since 1878, he estimates $1,000,000,000 as the present annual value of the forest products of the United States at primary points of production or manufacture. When it is seen that this manufacture now stands at the head of the manufactures of the United States in value, and that the white pine, which has been in the past and is still the most important factor in this great industry, is rapidly approaching extinction, the writer feels that he cannot be far astray in concerning this, as regards America, what he has already called it—the most important economic question of the day. The confusion in names has led many people to suppose that the yellow or pitch pine of the South will make an excellent substitute for the white variety of the North. This he says can never be, for the woods are most dissimiiar. The Southern pine, although excellent for many purposes, is hard and resinous, about the same weight as white oak, or nearly double that of pine or spruce, and hence not so easily brought to the mills as the lighter varieties of timber, which are taken with but little difficulty from the most remote sections, wherever water-course exist.—*N. Y. Post.*

REDUCE THE CUT

A correspondent of the *Northwestern Lumberman*, writing from Grand Rapids, Michigan, says:—It is with pleasure we daily hear from different sources the intention of lumbermen to largely curtail their logging operations the coming winter, but we fear with many it is only talk, and for the purpose of inducing their brother lumbermen to do less, while they will put in their ordinary and full stock. We hope, however, such a policy will not be pursued by anyone. Yet, "actions speak louder than words," and when such men are operating side by side it is very easy to see their intentions from the force of men and teams employed by them to do their work. Never in the history of our lumber operations could conservatism in the winter's operations bring forth such favorable results as at present. We have been favored this year with a very large demand. Nevertheless prices have been gradually going down on all lower grades, which affects from 50 to 75 per cent. of the entire stock, from $2 to $3 per thousand, while at the same time grades of lumber have been going up, until to-day our No. 1 boards and strips equal our regular grade of common boards ten years ago, and other grades in like proportion. This, together with the reduction in prices, will show lumbermen, when they take their invoice of this year's business, why the result is so unsatisfactory. If it were possible to make this invoice to-day it would require but very little, if any, urging to induce them to reduce this cut largely; but after their men and teams have been sent to the woods we fear they will be disposed to leave them there and hope for "something to turn up" which will let them out. We see nothing in the past season's trade and the prospects for 1884 to warrant them the realization of any such hopes. Under the circumstances would it not be well for lumbermen to "look before they leap," and see their landing? What, with an actual shortage and subsequent advance for 1884, can they lose? Their small stock of lumber will sell for more money; they will be in better shape financially; have more standing timber, and of an increased value. When men have everything to gain and nothing to lose, they feel safe, and such is the condition of lumbermen to-day, providing they are found next spring with not to exceed 40 per cent. of their usual stock of logs.

FOREST CLEARING.

Those who are laudably endeavoring to stop the wholesale destruction which has been carried on in clearing out the forests of this country will be glad to hear that the lumber manufacturers of the North-West have decided that the work of cutting off the valuable timber of the Northwestern States must now be retarded. Their reasons for coming to this decision are not from any love of the beauty or the benefits which the forests confer on the country, but simply because they find it is not paying them to clear off the forests at the rate they have been doing, and that if continued it will pay them still less. They have over-stocked all the markets, and as a consequence prices have sunk so low that the trade has become comparatively unprofitable. In this way the destruction of the forests has unintentionally received a check, and before the havoc is resumed perhaps the matter of their better preservation may receive the attention of the National Legislature.

It is time that the subject did receive attention. The Commissioner of Agriculture has shown that the supply of various kinds of timber will be exhausted within a very few years if the present rate of consumption is kept up. In the State of Maine pine will only last four years, and spruce fifteen; and the pine forests of Michigan and Minnesota will be cleared out in ten years, and those of Wisconsin in twenty. Already lumbermen are turning their attention to other states. According to Governor Berry they "are pouring into the State of Arkansas every day from Michigan and Wisconsin." The sawmills in that State have more than quadrupled since 1880, and the production of lumber there is twenty times greater there than it was just seven years ago.

As we before pointed out, the question of preserving a proper proportion of forests for the benefit of the climate, the streams, the soil, and indeed the general good of the country, is a national one. Private individuals cannot reasonably be expected to sacrifice their rights and interests for the good of the community at large without due compensation. To the lumberman the forest is just so much money so soon as he can clear it out and place it in the market, but in the North-West he finds he cannot do that profitably, and so he has called a halt; however, he will be up and at it again so soon as the markets improve, quite regardless of any other result than simply what the lumber will bring. And no one can blame him; it is not his duty to preserve the forest, but that of the nation or the state.—*Scottish American.*

Timber Purchase.

A part of the Cassellman estate, consisting of 5,357 acres of heavy wooded land at Cassellman, situated 30 miles east of Ottawa, on the Canada and Atlantic railway, has been purchased by Flatt & Bradley, of this city, for $132,000. Mr. Flatt has gone to Cassellman, and is making arrangements for the immediate erection of two large saw mills and a general store. Men and teams are being sent from this city, and lumber operations will commence at once. The South Nation river flows through the property purchased and joins the Ottawa, giving a straight drive to Montreal.—*Hamilton Spectator.*

Decorative Tree Planting.

The Commissioners of the Woods and Forests, of England, are trying to plant a large extent of crown lands in the Isle of Man with forest and ornamental trees. The experiment, which is watched with interest not only by those who follow sylviculture as an art but by many who regard with apprehension the gradual denudation of forest and woodlands, leads *Land* to comment on the growth of a taste for planting; for transforming to artistic plots grounds which are ill-favored and uninviting; for digging lakes and forming cascades, resulting in splendid combinations of sylvan charms.—*American Garden.*

Purchase of Timber Limits.

W. E. Edwards paid $37,000 at Ottawa on Saturday for three timber limits, containing 100 square miles, situated near the head waters of Lake Des Quinze, near the boundary line between the provinces of Ontario and Quebec, on the upper Ottawa.

THE Winnipeg *Times* says that the machinery for a shingle mill recently brought in from Winnipeg by Messrs. Watson & Cowie to their mill near Rock Lake was found to be so badly damaged on arriving at its destination that the proprietors considered that it would be useless to put the machinery together.

WASTE OF TIMBER.

A correspondent of the *Northwestern Lumberman* writing in regard to the state of Maine, says:—Ship builders have to resort to Michigan, 1,200 or 1,500 miles to get timber suitable for masts, to Virginia for ship frames and to Florida for planking. There is a vast amount of timber land in Maine yet, but it is second growth. Having seen the extermination of the old growth there, and coming to the West some 30 years ago, I was prepared to watch the operations of the tree cutters here. My first observations were that the people were wasting their good timber, and told some of them so, but as usual, the only response was that the timber was inexhaustible. I have been observing from that day to this. I have seen the choicest walnut that ever grew sell for $12.50 per thousand in this place, and have been offered $45 for an average lot, I have also seen fine walnut logs four foot through, lying and rotting: also saw this summer a lot of old rotten walnut logs at a saw mill, that were to be cut into lumber, such stuff as very few men would have hauled up for firewood a few years ago. There was a lot of walnut lumber brought to this place last spring, amounting probably to 1,000,000 feet, out of which, I think, it would be hard to cull 50,000 feet of No. 1 lumber. Thus we see that what one generation with plenty wastes, the next with scarcity, will glean up and use. Having seen these things, and seeing nothing done to secure a future supply, I have come to the conclusion that with the enormous amount of lumber used, and also knowing that there is an immense tract of territory settling up that has no timber supply, and that must draw on the reserve of the older states for its building material, I can come to no other conclusion than that the next twenty years will wind up the business, as it is now carried on, unless there is a radical change.

Not Reducing the Cut.

It is very clear that some of the largest operators are going to take no steps to reduce their cut of logs the coming winter. They say they cannot afford to do it. Their money is invested in their business, and they know of no way but to keep things moving. Moreover they claim that they have made a good profit the present season, notwithstanding prices have ruled lower than last year. They bought their pine for little money, and are going to look out for No. 1 instead of the good of the trade at large. All this was foreshadowed at the recent meeting of the manufacturers in this city. They said in a resolution, "we recommend to all manufacturers of lumber in the pine producing regions, such conservatism in their endeavors during the coming winter as will tend to restrict the tendency toward an over supply of logs during the year 1884," but care was taken by some of the members of the association present that they should not pledge themselves to reduce their cut.—*Northwestern Lumberman.*

READERS of lumber journals are often puzzled by the use made of the word "deal" by nearly all foreign publications, and some home ones. As generally used it means simply a piece of softwood lumber; but the strict definition of the word, ae understood by the English timber merchant, is soft wood timber imported and sawn to the section of 9 by 3 inches, or 8 by 4 inches, or 10 by 4 inches. Similarly, "planks" are 12 by 3 inches or 12 by 4 inches, and "battens" 7 by 1½ inches or 7 by 3 inches, all irrespective of length, which varies considerably, and of the country or port they come from.

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhœa, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle,

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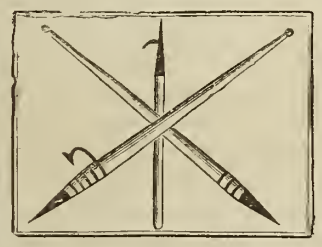
HAND SPIKES  CANT DOGS

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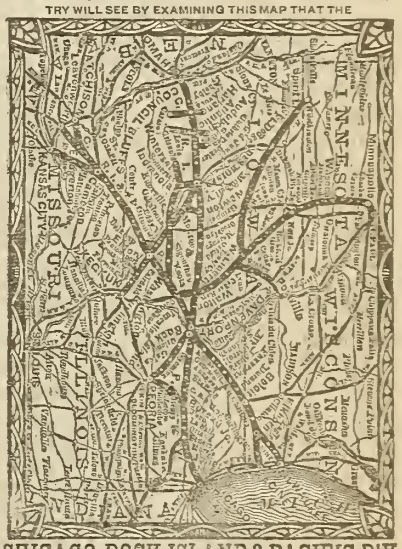

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PETERBOROUGH, Ont., NOV. 15, 1883.

A machine has been invented, and in successful operation at Glen Falls, N. Y., for making pulp for paper out of sawdust.

THE property of the Norwood Lumber Company was sold at auction in Norwood, N. Y., on the 8th, for $166,500, to A. O. Brainerd.

G. R. CASWELL has shipped over a million feet of spruce lumber from Cowansville, Que., during the past summer, and has 1,000,000 feet more ready to ship.

J. W. PORTER & SONS, of Strong, Me., will this winter get out the material for 50,000 croquet sets, to say nothing about what is required for an indefinite quantity of Indian clubs, ten-pins, chair bottoms, clothes pins, excelsior, etc.

THE *Timber Trades Journal* says:—Russia has been for a long time suffering the effects of reckless forest devastation. *Nevoe Vremya* says that the wanton destruction of timber threatens to turn some of the best wooded provinces iuto barren waste.

MESSRS. Brousseau and Godbout, of Danville, have started a tub and pail factory, in one flat of Loug & Bailey's new shop, where they intend to make everything in their line for the general trade. They will employ about eight hands at first, and increase as business requires.

AT San Francisco, Cal., there has lately been an increased export demand for lumber. Orders for building stuff from Australia have been good, and hardwood lumber and ship knees have been in rather extensive shipment to China, the Mexican trade being also on the increase,

THE logs that escaped from Grand Rapids, during the July disaster, have been brought back at a rate of 175,000 feet per day, by rail. There are 4,000,000 feet of the logs on the Comstock farm, near the river that have been left, because the high water of uext spring will float them off, aud there are 3,000,000 feet more below the city.

JOHN DUBOIS, of DuBois, Clearfield county, Pa., is, perhaps, the wealthiest lumberman in the world. His wealth is estimated at $14,000,000. He employs 500 men in his various lumber mills, and 1,000 in getting his timber from the woods; also 600 more in mining coal. He offers, if a new county is made of fractions of Clearfield, Elk, and Sefferson, and named from him, to build a courthouse and other public buildings at his own expense.

THE *Lumberman's Gazette* says:—There will undoubtedly be an enormous amount of lumber wintered over on the Saginaw River. The piles which line the docks for miles in almost unbroken courses at present, and the fact that the shipments will barely equal the output for the remainder of the season, indicates unmistakably that whether sold or unsold, there will be an enormous aggregate of lumber remaining here at the close of navigation.

THE London *Timber Trades Journal* of Oct, 20, under the hoad of that port says:—The Adolphus, from Quebec, besides her cargo of deals has oak, elm, ash, hickory, with staves, &c., which is to order, This is the second voyage of the first-nmed vessel, and her additions to the pine stocks this season amount to upwards of 2,000 standards. Spruce cargoes are dropping in, and already the list of vessels to London from the lower ports this season exceed those of a twolvemonth ago by ten cargoes.

THE London *Timber Trades Journal* says:—It was rather an amusing idea of the people of Kirkwall, in the Orkneys, which Mr. Gladstone visited the other day, that it would be necessary to be careful of their one tree in that town with such a dangerous feller among them, and Mr. Baillie Peace and the other gentlemen who escorted the right hon. gentleman guardedly piloted him along the other side of the way, in passing the tree, that he might not be tempted to inquire for an axe and request permission to cut it down.

THE Rat Portage *Progress* says:—We have it from good authority that the claim of the Keewatin Lumber Company to the islands in the Lake of the Woods has been relinquished. The Dominion Government has entered into agreements with the company to grant them certain additional timber limits on Clearwater and Ptarmigan bays in order to secure their release to the islands to facilitate mining operations. Heretofore this has been a great drawback to miuing ventures, but according to the new arrangements, parties are porfectly safe in locating and surveying islands.

THE clearing away of logs from Grandfather Bull Falls, about 40 miles above Merrill, Wis., has been very thorough. The logs had been accumulating for years, and were hidden away in all manner of crevices and holes, among the rocks for a distance of a mile or more. The contract to remove them was taken at $1,25 per thousand feet, with the understanding that it must be a clean job, and that a forfeit must be paid for all that was left. Between 3,000,000 and 4,000,000 feet of logs were taken off and boomed at Merrill, the most of them being owned by the Wausau mill men. Logs have not been so scarce around Grandfather Bull for years.

The *Monetary Times* says:—It is feared that the results of the failure of J. Daigueau & Co., bark dealers, St. Hyacinthe, Que., may be embarrassing to others, as that firm was the heaviest buyer and shipper of hemlock bark in the Eastern Townships, and its operatious were extended over a wide territory. Since two years ago the firm tried to "corner" the market, holding at one time 60,000 cords of bark, but, evidently did not calculate upon the large supplies that the Boston people could draw from Maine and New Brunswick. Iu consequence of this, the "corner" did not work just as wished. Their liabilities will exceed quarter of a million, and the estate will be liquidated under the supervision of Mr. Wm. Farwell, of the Easteru Township Bank, to whom an assignment has been made.

ANOTHER tree for which the usual claim is made that it is the oldest one extant in the United States, is an English elm, growing at Pettacauset, R, I. It is positively know to be 200 years old. At the butt the circumference is 26 feet, and it holds nearly the same measurement to the limbs 30 feet from the ground. The limbs are as large as a man's body, and very long and crooked, holding their full size nearly to the ends. This is accounted for from the fact of a gale once having broken the limbs off, causing them to grow on in a stubbed manner.

AN imitation of and substitute for mahogany, usoful in fine manufactures, is due to French ingenuity. The first operation is to plane the surface of any species of close-grained wood until it is perfectly smooth, and it is then rubbed with diluted nitrous acid, which prepares it for the materials subsequently to be applied. These consist of one and a half ounces of dragon's blood, dissolved in a pint of spirits of wine, and one-third of that quantity of carbonate of soda, mixed together and filtered, the liquid in this state being rubbed, or rather, laid upon the wood with a soft brush. This process is repeated with very little alteration, and in a short interval the wood possesses all the appearance of mahogany.—*Warren's Monthly Review.*

REVELATIONS OF SEPTEMBER.

The London *Timber Trades Journal*, commenting on the Board of Trade returns, says:—In regard to the timber importation for the month has, according to our anticipations, overrun tho imports of last year, up to the same period, but not to so great an excess as some calculators were prepared for. Up to the end of August there still remained some 10,000 loads to come forward to bring the supply up to the level of 1882, but the scale is now turned—something rather considerable—the other way, as the end of September left us with 73,726 loads more in haud than had come at the end of the September previous. Last year the importation of September rather exceeded that of August, but this year the supply in September fell behind that in August by over 90,000 loads; so that the ratio of importation may be said to show considerable abatement, and not likely now to be of a very overpoworing character. From Russia, Sweden, and Norway the supply was absolutely smaller this September than the one before, both in hewn and sawn wood, but from British America the quantity sent forward to this country was more than doubled. Canada, in the face of its threatened scarcity, has managed to spare us 100,000 more loads in a single month than came thence last year at the same period, and, whatever price was paid for it, the value of the wood is lower iu this country now thau it was then. Spruce, the staple of the Lower Ports, is comparatively a drug in Liverpool now, as the demand is stated by our correspondent to be quite inadequate to the quantities injudiciously thrown upon the market—the favorite emporium of the west for all waifs aud strays, iu the shape of timber ladeu ships, with uo fixed destination, except to call for orders. All the lesser ports may be jammed up with timber, but in Liverpool, as in London, there is always a price to be had if the importer is williug to take it, and its convenieuce to the Atlantic gives it the saue prefereuce from the American timber ports that London has from the Baltic. Thus there has been seldom any deficiency of transatlautic timber in Liverpool since steam has taken up the carryiug trade and rendered it to a great extent independent of the wiuds. Had not our North Americau colonies contributed so large a quota in excess of their usual figures iu September, there would have been a smaller importatiou last mouth than in the same month last year.

The alleged shutting down of their saw uills does not appear to have been decided upon a day too soon. When we hear such extreme measures talked about abroad, experienced meu in the trade generally look out for uuusually heavy supplies, aud such is the case from the western ports just now. The import of pitch pine seems to have fallen off in September, as the United States sent us in the uonth about 47,000 loads less thau last year, which is some offset to the excess from Canada; so that on the whole there was not much to depress the trade generally in the September returns, and there is every possibility that there may be no unreasonable accumulation of stock in this country when the season closes, and if that should really be the case prices are not likely to give way further this year, and everything might be hoped in the way of good trade at the opening of the ports next spring.

But the season of this year is not yet near its close. and last year the fall trade began to collapse about this time as regards the importation, which in October went back in comparison of September more than 100,000 loads; nor is it unlikely that something similar will take place now, though there is not quite the same check to the chartering department that there was then. But it is not from that source altogether that supplies are inflated. It happens more from the want of charters, as seeking ships then load on owner's account, to chance the market, while their owners or agents on this side are looking out for the best port to send them to on their arrival in order to make a tolerable freight. When we see many ships cleared to call for orders, it may be taken that they are loaded on speculation, and these are the cargoes that damage the market. The millowners abroad have also their agents in London and Liverpool, or perhaps a branch house of their own, who are kept well informed of the state of the stocks at the shipping ports, and authorized to charter for market when orders are slack. So that in point of fact there is nothing to regulate the market on this side as long as there are cargoes to ship and ships at a reasonable freight ready to load them.

In summing up for September the trade will probably be well satisfied to find that the importation was not larger, as it is not now likely that the usual fall routine will be materially departed from in the comparative quantities to come forward between this and Christmas. September, as we have shown, was far behind August in its supplies, October will probably be still further behind September, and by the time we have November upon us the arrivals are not unlikely to dwindle to something very inconsiderable. So that, after all, the importation may not be in excess of last year, or at any rate not to a larger figure than it had attained to at the end of last month, viz., abont 73,000 loads. But with this addition the timber supply from abroad in the present year of grace 1883 would be the largest recorded since 1877. There is small chance, however, of its coming within 500,000 loads of the importation of that extraordinary year when the total amounted to 6,652,321 loads, a greater quantity by 450,000 loads than has been brought into the United Kingdom in any one year since.

FORESTS AND STREAMS.

About two months ago we published an article on the effect of the removal of the timber from the headwaters of the Hudson river on the navigation of that stream at Troy, Albany and down as far as Hudson, showing that it caused unusual freshets in the spring with incalculable damage, in consequence of the removal of the timber permitting the free and uninterrupted flow of the rainfall and melted snow into the tributary streams and flooding them, and the combination of the same completely filling the bed of the Hudsou until its accumulated force swept everything before it, destroying property aud very often sacrificing human lives. While this is so, the subsidence of the overflow leaves the bed of the stream in midsummer nearly dry, because the supply which continued during the summer months, while the forests were standing, to distribute the outflow gradually, was exhausted, aud left nothing to feed the main streau except the springs and other natural resources of the rivulets at the headwaters. The result is that the navigation of the Hudson river from Hudsou to Troy is seriously endangered, and the immense traffic of that grand old stream, unless the legislature interferes to prevent such a consummation, by forest protection and an organized system of arboriculture, will soon be compelled to seek its destiuation by rail.

Since the publication of our article on this

subject, the New York *Sun* has discussed the question of the endangered condition of the grand old Hudson which has so long been the pride and boast, not only of New York state but of the nation, embodying all the facts presented by us, and painting it in a much stronger light than we presumed to, and also urging the law makers of the Empire state to immediate action, in preventing the slaughter of timber in the Adirondack region, and a systematic reforesting of the denuded land at the headwaters and around the tributary streams of the Hudson. Thus is New York and other states being aroused by this important question, which involves so much of the business and commercial prosperity of the nation.

The Penobscot river is also yearly suffering from the same cause, and the navigation of that stream is also annually threatened. A correspondent of the Boston *Post* reports that the loss to Bangor could not now be repaired before the close of navigation. The Penobscot at that point is so low that the Boston steamers can scarcely navigate it, and vessels lie around at many docks where there is usually deep water. The water opposite the city cannot be drunk, and boatmen have to get their supply elsewhere; and the boilers of the steam mills which use river water are coated with salt. Many of the water power mills have shut down and those still in operation are running slowly, curtailing the production of lumber 500,000 feet a day. It is many years, says the *Post's* correspondent, since the docks at Bangor were so cleared of manufactured lumber, and while possibly no single industry has suffered so materially from the prolonged drought in New England resulting from the various causes alluded to above, as the lumber business in all its ramifications, yet navigation, commerce, mercantile and manufacturing are all effected to a greater or less extent.

In alluding to the connection between forest and flood, the *Providence Journal* says that violent floods alternating with extreme and long continued low water each damaging to navigation and commerce, have been noticed in the Ohio valley now for some years, and with such regularity that they can no longer be ascribed to exceptional conditions. The river is more and more assuming the conditions of the Nile, or rather of those which flow through the treeless deserts of Arizona and New Mexico, which are raging torrents at one season and dry beds of sand at another. Nor is there any doubt that it is from the same cause. Whatever affects forests may have on the rainfall itself, and there is no doubt that it is very considerable, it is certain that its leaves and roots absorb and hold it in longer solution, and that instead of pouring down into the streams at once, it slowly percolates and its flow extends over days instead of hours.

We are pleased to notice that the regular news journals throughout the country are becoming so intensely interested in this subject, and that the labors of the few publications and prominent men of the United States and Canada who have taken the initiative in the movement, are at last being appreciated, and that the wanton and wasteful destruction of the forests, against which they have fought so strenuously stands some show of being finally successfully resisted by legislative action.—*Lumberman's Gazette.*

TRADE WITH FRANCE.

The London *Timber Trades Journal* says:—The importation of Canadian whitewood (spruce) has been somewhat below the average and considerably under last year's—the heaviest on record; but this decrease is due to the sellers, who, instead of accepting the prices offered them in the beginning, were pressing things too hard, thus allowing the importers to provide themselves with Swedish and Riga whitewood, which was being offered remarkably cheap, The only one who really seized the opportunity were an experienced firm of Paris agent, who, profiting by the activity of others, accepted the moderate prices offered at the commencement, and eventually took the business out of their hands in all that was required in the spruce trade on the Continent. The most important firm here, however, alarmed at the rapid fall of prices in the month of February last (having just purchased a large quantity of Swedish goods at fair prices), did not venture to deal in spruce goods until lately; but they have not been behind anywhere, having provided themselves with every description, as above remarked.

Speaking of Canadian goods we have had a cargo this year of Quebec spruce, which, however, was not approved of, the lengths being too short, and the quality contrary to expectation, and we do not think such goods will meet with favor here. The arrivals of pitch pine have been small, for it seems that class of goods too is not in great favor here.

British Forests.

The forests of the United States have been so mercilessly stripped of trees that a wood famine is almost inevitable in a few years. The lumbermen have been allowed to do practically as they pleased, and they have pleased to reap always and sow never. But an end is coming to that reckless method of procedure, and the lumbermen themselves are beginning to see that "something" must be done. That something can, of course, only be planting on a large scale. Happily, there is little fear of similar dearth in Great Britain; none, at any rate, until the great landlords are reformed out of existence. For almost the sole reason that England and Scotland are so thickly wooded is the perseverance of the landed class in tree planting. One family alone, that of the Dukes of Athole, has in a hundred years, planted scores of millions of trees. The "landed duke," who commenced operations in 1774, planted 27,000,000 trees, covering 15.000 acres, principally upon the Dunkeld hills and in their neighborhood. The present Duke of Athole plants from 600,000 to 1,000.000 trees every year. The terrible storm which destroyed the Tay bridge blew down 80,000 of the Duke's trees, but the loss was hardly noticeable.—*St. James Gazette.*

Commercial Value of California Redwood.

The California Redwood Company is the title of a Scotch company which has been started at Edinburgh, with the chief object of supplying the growing demand for redwood timber, suitable for high-class work, suce as interior house finishing and ornamentation, cornices, carvings, pillars, mantels &c., and which the California redwood is reported to be especially adapted for, having a fine texture without brittleness and of great durability. This company have recently bought forest lands in the Oregon district, and purpose carrying on extensive operations both in the home and foreign markets. Californian redwood, unlike many other kinds, has this recommendation, that the stumps can be utilized to profitable advantage, and for veneering purposes, slices from these stumps are said to be highly prized, and may by and by become yet more valuable. The capital stock of the company is nominally £900,000. It will have mills for the manufacture of the timber, and the stuff so prepared will be sent by rail to the various markets of the United States, as well as for shipment to those in Europe and the east.

Southern Pine Lands.

The Bay City *Lumberman's Gazette* says:—Some idea may be formed of the extent to which northern capital is seeking investment in southern pine lands, when it is understood that in three years a single firm, Messrs. E. A. & E. F. Brakenbridge, formerly of Oscoda and well known in this city, have located and sold three-quarters of a million acres of long leaf yellow pine. Some of the purchasers also are Bay City capitalists, and others well know hereabouts. The following are a few of the names: Fowler & Chapman, B. E. Warren, N. B. Bradley, W. C. Yawkey, George W. Pack, John L. Woods, W. B, Morley & Son, E. P. Barnard, M. R. Gay, Penoyer Bros., Alger, Smith & Co., Robt. Nason, Louis Penoyer, Benton Hanchet, Charles Green, Wm. Green, and others.

ANOTHER WITNESS.—A. Chard, of Sterling, testifies to the efficacy of Hagyard s Yellow Oil, which he used for a badly injured knee joint. It is now the great household remedy for inflammation, pain, soreness, lameness, etc., and is used both internally and externally with infallible success.

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One Fleming & Sons' 50 H.P. Engine and Boiler,
Waterous Saw Mill, Daniel Planer, Band Saw, Planer and Matcher, Saw Tables, Shafting, Belting, etc.
If not sold *en bloc* by the 10th of October, will be sold in lots to suit purchasers.
Catalogues giving particulars of the Machinery, etc., can be had from the liquidators, or at the offices of W. H. OLIVE, No. 167 Prince William Street; T. McAVITY & SONS, 13 King Street, St. John; and W. E. SKILLEN, St. Martins. 4L21

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For particulars apply to
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ST. LAWRENCE CANALS.

Notice to Contractors.

THE LETTING of the work at the upper entrance of the CORNWALL CANAL, and those at the upper entrance of the RAPIDE PLAT CANAL, advertised to take place on the 15th day of NOVEMBER next, are unavoidably postponed to the following dates:—

Tenders will be received until TUESDAY, the FOURTH day of December next.

Plans, specifications, &c., will be ready for examination at the places previously mentioned on and after TUESDAY, the TWENTIETH day of NOVEMBER.

For the works at the head of the Galops Canal, tenders will be received until TUESDAY, the EIGHTEENTH day of DECEMBER. Plans and specifications, &c., can be seen at the places before mentioned on and after TUESDAY, the FOURTH day of DECEMBER.

By order,
A. P. BRADLEY,
Secretary.

Department of Railways and Canals, Ottawa, 20th October, 1888. d103

THE FORESTS OF ONTARIO

Having given, from the report by Mr. R. W. Phipps on the necessity of preserving and replanting forests in Ontario, voluminous extracts as to the treatment of forests in other countries we now proceed to quote from the same authority information as to our existing forests and the localities where they should be preserved or reproduced:—

THE HEIGHTS OF LAND OF ONTARIO.

We will now proceed to consider, in the light afforded us by the preceding, what should be done to preserve the due proportion of forest and consequently regular summer rainfall in Ontario. My readers will have noticed of what vital importance it is to preserve the higher lands in forest. There are four elevated ridges or plateaux in Ontario. The first and nearest of these is that, well known as the Oak Ridges, north of Toronto about thirty miles, which passes round to the west, coming at Hamilton close to the Lake, going round the head of the Lake, and dying away in the Niagara Peninsula. Going eastward from the samo point, 30 miles north of Toronto, it gets much nearer to the Lake at Cobourg; passes on, strikes the Lake at the Trent and dies away there. This ridge being near the front, and entirely in the older settled portion of the Province, has probably long ago altogether passed out of Government hands. Much of it is by no means the best of soil, and could it havo been retained in timber, and the height of the trees increased by replanting, the benefit to the Province would have been incalculable; for this long belt of forest would have met, and precipitated into rain, the moisture of the southwest winds coming across Ontario and Erie, which rain would then have frequently and regularly fallen through the summer on the great cultivable area of land to the north, instead of passing, as it now does, largely on to the Nipissing forests. In any scheme of planting forests for the benefit of the Ontario climate, the reforesting of portions of these ridges would exercise an influence extremely valuable. I should therefore recomend that the possibilities of working in this direction should be carefully considered.

THE WATERSHED BETWEEN KINGSTON AND NIPISSING.

This is a true watershed, the rivers running both ways from its summit. The height of land extends, with a slight curve to the north, from Kingston to Lake Nipissing. To the east of this all streams flow into the Ottawa; to the west of it they flow into Lake Ontario. Much of the land on this ridge is still in the hands of the Government, and, both for purposes of increasing rainfall, and preserving moisture at the source of numerous and important streams, it would be well that large masses of forest were preserved along the whole line. Along this line, if possible, hundred of thousands, or even millions of acres might be left in forests; for this ridge soould be the preserver of fertility and source of moisture to the whole of eastern Ontario, from Toronto to the Ottawa. If this line should be allowed to become deforested, very injurious results may be expected throughout all Ontario, east of Toronto. On the other hand, if forest be maintained there, clearing can then be proceeded with along the whole northeast of the preserved forest, and this cleared region will then receive the spring and summer rain precipitated by the preserved line of forest along this watershed.

THE WATERSHED OF WESTERN ONTARIO.

This is a height of land about the centre of western Ontario, and is best known as the locality of the great Garafraxa Swamp, which contains many thousand acres. Such of this as is not in Government hands, might, no doubt, easily be obtained, and probably, much land in the neighborhood cheaply added thereto, and the timber on the whole reservation carefully preserved and increased by planting. This central point is a thousand feet above Lake Ontario, and from its four sides the rivers run to the Georgian Bay, to Lake Huron, to Lake Erie, and to Lake Ontario.

THE BLUE MOUNTAINS.

This is a ridge of mountains at the extreme north of peninsula, extending from near Collingwood, past Owen Sound, and to the northern point of the promontory extending between Lake Huron and Georgian Bay. Much of this is yet in the hands of the Government, and much of it should, if possible, be preserved in timber.

For the purpose of attracting rain in summer and spring, which would otherwise probably pass to the north on its way to the pole in the great equatorial air current, there is little reason to doubt that large masses or belts of forest, left standing on these ridges, would be more efficacious than a much larger amount left scattered through the country. Moreover, these elevations are the natural storehouses and reservoirs of moisture. The woods on their slopes were intended to hold the water of rain and snow from flooding the land when it was not needed, and to deal it out in creek, river and underground channel, as it should be needed throughout the year. Any one who has read the valuable records, examples and statements, collected and compiled in the preceding part of this volume, will need no further evidence, and will well understand, on being shown the heights of land and watersheds, what should be done with them. It is extremely desirabie that they be, where possible, maintained in a forest state, the manner of doing which had been previously explained; and that, whore disforested, they be, in preference to any other land, the scene of foresting operations.

It should be pointed out that it has been found in every country where forestry is practised, expedient to set in operation several nurseries for the purpose of raising the seedling trees adapted for planting, of such varieties as are most suitable. These should be selected, not necessarily in any of the localities described as heights of land, but as a small portion of land would be sufficient, in any part of the country, where the soil and situation are considered most favorable for the young plants, considered with regard to their future destination. This can be well learned by consultation with those who have made such experiments, of which some are reported in those pages. It may be remarked that, although it is recommended by some experimenters to rely on the forest for seedlings, yet in other countries, where equal or greater facilities exist in that respect, nurseries are always found necessary, and would, for various reasons, probably be so here.

It would appear that, in planting or preserving these heights of land, the trees chosen should be largely of the pine variety, In the first place, their height is of great additional service. 2nd. They are evergreen, and preserve deep forest shade and sheltor in summer and winter, spring and fall. 3rd. The soil of these localities is likely to resemble that found suitable to these trees in other lands. 4th. They may be relied upon for a paying return, year after year, if preserved with care, as this is the most valuable tree for commercial purposes. 4th. They will, many authorities say, grow to a size fit to cut much sooner than the hardwoods of equal value. 6th. They can be, it appears, very successfully interspersed with the hardwoods, especially the beech, which would add to the plantation all the advantages of a deciduous forest,

THE GREAT FOREST TO THE NORTHEAST.

As mentioned in the first part of this book, there is a great and largely untouched forest to the northeast of the Province of Ontario. The reason why this mass of forest has not been ere this more deeply penetrated by the settler is, that the land is not nearly so good for agricultural purposes as that in the older settled districts of the Province.

In one word, it is the Laurentian formation, an outcrop of the backbone of the world, and that backbone, unlike other bones, contains no lime; it is a granite formation, and, though there are in parts of it opportunities for obtaining lime from the gneiss rock, yet, do what you will with it, this district will never equal in an agricultural capacity (*caeteris paribus*) that based on a limestone formation. The detritus of granite is not, and in the nature of things cannot be, for agricultural purposes, in any respect the equal of the detritus of limestone. This great region is reached from Toronto at a point near Gravenhurst, and its border would be marked by a curved line from Gravenhurst to a point about five miles east of Kingston. To the northeast of all this line is a vast mass of forest, pierced in many points by colonization roads, and interspersed with clearings along its southern edge. To this district we may add the Muskoka and Parry Sound regions, which are, in many respects, similar. In these there are situated great pine districts, many of which have been cut over by the lumberman, while much is yet untouched and in the hands of Government. It is, it appears to me, a matter of great importance, to preserve many of the pine forests in these vicinities, and that for these reasons:—

1. They are the true reserves of the older districts of Ontario.

2. The land whereon they stand can never yield, for purposes of agriculture, anything like the return it is capable of producing if maintained in continual pine-bearing forest.

3. If proper care be taken these great districts can, by the adoption of European methods, be placed in a state of continual reproduction, which will allow, every year, a very large amount of valuable pine to be cut without clearing the land or in any way injuring the forest capacity for production.

4, It would be far better to commence the preservation of forest areas along the present existing line of clearing than to commence similar operations much farther back. If, as is stated, the land is much better farther to the north, it would be better to renew the clearing there, so as to leave a broad belt of forest to the south of the new settlements; for a forest district to the south (without prejudice to the height of lands considerations) will attract summer showers to the cleared land north of it, while from a north forest comes little rain at the season when most needed.

PROTECTION FROM FIRE.

The great difficulty in maintaining forests in this country lies in protecting them from the ravages of fire, to which they are peculiarly subject. Our hot summers dry the edge of the forest, the cuttings left by the lumberman greatly increase the danger, the cattle of the settler dry and impoverish the edge of the forest for many miles, a dry season comes, fire is ignited by the clearing fires of the settler, by those of the lumberman or the hunter, or it may be at some point where the railway has touched the forest line, by a spark from the locomotive. There are two seasons when fires are likely to run—the first is during the hot months of summer, the second late in a dry fall, when the fires run on the thick carpet of dry leaves. This last I think the more rapid of the two. I have seen it come miles abreast through the forest with the speed of a fast walker, firing every inflammable substance in its way. The terrible devastation caused by these fires when under full headway is ruinous beyond imagination. Hundreds and thousands of square miles of beautiful forest have been reduced to ashes in periods of a fortnight or even of a week. It has been well remarked by persons fully competent to express an opinion on the matter, that the fire destroys more timber in Canada than the axe. If, then, some means could be devised to check this devastation, the result would, no doubt, be extremely beneficial to the country.

The recommendation I have to make, with respect to these forests, is one based partly on the character of the soil, partly on the practice existing in India and in Europe, and pursued there with the same intention. It is impossible to preserve the extensive Canadian forests from fire without appointing extensive ranges, few or many, as may be judged expedient, whose business it shall be to carry out, in this country, as far as their numbers will allow them, the policy pursued in European countries of guarding against fire, giving warning where it occurs, and prosecuting all individuals who infringe the fire laws established by Government. To my own knowledge, the laws enacted by the Ontario Government with reference to the management of fires, their lighting and extinguishing, are carelessly observed, or even altogether ignored in the back districts through which I have travelled. I should, therefore, recommend that a certain number of men be appointed to watch breaches of these laws and institute the necessary prosecutions.

The East India practice to which I refer is this. In the vast Indian forests, under the careful supervision which has been established there by the Indian Government, every effort has been made to suppress or hold in check what with them is a still more dangerous enemy than with us, the ignition of the forests. The principal means used and recommended by them is, the cutting of what are called fire lines through the forests for long distances. These lines, it is recommended should be made two hundred feet wide, and be kept quite clear of brushwood, or any other inflammable matter.

In travelling through different parts of this northeastern district of Ontario, and having in successive years passed over several hundred miles of it in different directions, I became decidedly of the opinion, that the whole country was far better suited for extensive grazing grounds, interspersed with manufacturing villages, than to be given out in one or two hundred acre lots to the ordinary settler. Considering the character of the land, I am of opinion that many ordinary settlers will not be able to give it that care which alone can maintain its fertility; I fear they will in many instances, be obliged to overcrop it, to impoverish it, and to abandon it. The granite formation, I fear, will never show the staying qualities of the limestone-founded portions of Ontario. On the other hand, I think if much of this land were given out to men of capital, who would be willing to establish large grazing farms thereon, they would be able to cover the soil with a heavy clover sod, which, with careful management might be maintained for ever.

I will, then, suggest what would be my plan if some millions of acres of this vast forest were mine, and I were desirous of preserving it from the ravages of fire. I would cut the fire protecting lines, as used in India, through and through it at different points, clearing them thoroughly from brushwood, but I should make them wider, say, a hundred yards broad, and I should suggest that paths a hundred yards broad cut through these forests, and fenced at each side, would make excellent grazing runs for cattle, if got under grass, and would operate as most effectual firebreaks. I should think that an arrangement might be made whereby graziers would gladly lease these lines, undertake to seed them with grass and use them for the fattening of their cattle, which would readily find water at the numerous streams these firebreaks would necessarily cross. A portion of the consideration paid for the use of these grazing-lines, might well be the undertaking on the part of the grazier to send a certain number of men to extinguish any fire which might arise in his vicinity. In this manner, I conceive that, by the assistance and supervision of a small force of Government rangers, very large forests might be preserved from the ravages of fire.

In connection with the manufacturing capacities of this region of country, I would remark, that it possesses many and valuable watercourses, which would dry up were the country cleared, but which the retention of the forests will retain in full value. I would also state, that the quality of the water flowing over the granite bed, it being from lime, is remarkably well adapted to various textile manufacture, and would suggest that large manufacturing villages and towns might find occasion for profitable existance in the heart of the large forests which, I conceive, Government should retain in this part of the country.

I would also suggest that such towns and villages will by no means lack communication with other parts of the country, as the Canada Pacific, and its connecting railways, will pass through the present wilderness near the vicinity where it is desirable these forests should be maintained.

I would here suggest that large portions of forest might be presereed, let us say after the merchantable lumber has been carried off by the lumberman, by allotting them in free grants to persons who would undertake to maintain the land in its wooded condition.

The opinion of Mr. Ward, of Montreal, is, "To have our country remain well wooded for many years, it is but necessary to give the trees indigenous to our country leave to grow, and there will be no necessity to plant. I have no doubt but that much of the land that has been

denuded of its timber would in a few years be covered with a spontaneous growth of wood, and so prevent our country from becoming an arid waste, utilizing only that portion of it that can be profitably worked." Mr. Cleveland, of Chicago, remarks "A vast area of woodland is running to waste, yielding no revenue and promising nothing better in the future than firewood, of which a very large proportion is yet susceptible of redemption and conversion into timber of great value, at far less cost of time and labor than would be required for the planting and rearing of new forests." If then we give free grants of land where clearing and cultivation is desirable on condition that the land be cleared and cultivated, I should think it would be well to give free grants of forest where forest is desirable, on condition that the forest be kept in good order, that it be fenced against cattle and thinned as directed by regulations which should be laid down by a Government official of knowledge in such matters. This would give people who wish to acquire land, without being compelled to reside thereon, the opportunity of doing so, as they could hire the necessary labor and care, of persons in the neighborhood, and they would naturally see that their employees preformed their duty properly, since that would constitute their only right to the land, and their only protection against fire overrunning it.

THE NORTHWEST TERRITORY OF ONTARIO.

A word may well be said here on this subject. Full control of this territory is withheld from its proper possessers by the delay in ratifying the Boundary Award. It contains a large quantity of valuable timber, comprising one of the chief timber reserves in all the North-West, so far as present information is obtainable. This timber, in a position where it will always command ready sale, and comparatively untouched by the lumberman or settler, offers as yet a most excellent opportunity not only for procuring timber, but also for maintaining the supply. If this reserve were at once taken in hand and managed on the European or East Indian plan, those trees only cut which are of age and size, and cut so as not to injure others; and the whole forest then mapped into sections, each in charge of a competent forester, the forest could be maintained in perpetuity as good as, or better, than it now is, and a large supply of the best lumber yearly drawn therefrom.

Further hindrance of the right of control belonging to Ontario will be most prejudicial. For in the meantime the demand for lumber in the North-West will grow apace; private individuals, will commence to cut; lumbering operations will be carried on by rival parties; and as soon as these operations are proceeded with on a larger scale, and with the reckless haste which probably will characterize them, fire is certain to occur, probably at many points, and, in that region of rocky timbered slopes and ridges, fully open, too, to the sweeping prairie winds, it may well be expected from what has happened in far less exposed localities, that before the boundary is found, this great forest, of priceless value if properly used now, will be utterly lost.

Pacific Coast Timber.

The lumber trade direct between Puget Sound and adjacent territory and Australia has become important. The point, however, occurs whether it is not desirable to adopt measures for the preservation of the forest timber. The Pacific coast is being rapidly denuded of timber, and nothing is done to compensate for the loss by planting new forests. Climatic changes of very serious character may be anticipated from the wholesale destruction of growing timber. A correspondent writes to us from California stating that he had driven recently for days through the Sierra Nevada range, and that the usually bright atmosphere of that elevated region was so charged with smoke from burning pine trees that it was impossible to see for any considerable distance. Millions of dollars worth of valuable timber are thus annually destroyed on the Pacific coast. Sheep-herders and hunters are the greatest offenders, but as they are never prosecuted they continue their devastations year in and year out. It should be somebody's business to prevent this waste of national propert.—*Ex.*

Chips.

DENSE forests are increasing in Australia, the climato is growing more moist, and even the great central desert may become habitablc.

A CHARLOTTE, N, C., man years ago grafted a twig of English walnut on an American walnut tree, this year has a big crop of two kinds of walnuts.

JOHN DICE, of Thomastown, Michigan, struck a perfectly sound cedar limb, while digging a well, at a depth of 12 feet, in a bed of solid gravel.

COMPLAINT is made of the severe destruction of oak trees in Hetch-Hetchy valley, Nevada, by the Piute Indian, who recklessly fells them to get the acorns.

HEMLOCK bark is not yet "cleaned out" of the eastern townships, as the *Monetary Times* hears that 500 cords will be shipped from East Pottom this season.

A solution of bichromate of potash is often used for darkening mahogany. It converts the light-colored mahogany to the tint of the old mahogany furniture.

THE Forest Pulp Mills, of Yarmouth, Me., are making extensive improvements, which employ regularly about 150 hands. For fibre 1,000 cords of poplar are annually consumed.

THE tooth-pick factory at Harbor Springs, Mich,, which is being established by Cleveland, Ohio, capitalists, will consume 20,000 cords of wood annually. The building will be 30x124 feet.

KANSAS had on March 1, 1883, 9,341 acres of artificial walnut forests; 5,890 of maple; 1,691 of honey locust; 55,207 of cottonwood; and 50,589 of other varieties, making a total of 122,718 acres. At this rate of planting forest trees Kansas will soon have valuable timber, and not only that but plenty of wood for fuel.

PAINTED wood-work may be classed among the necessary evils of house decoration. No one in his sober senses will put paint on good wood-work if he can get an equal effect by the use of natural wood. But the costliness of hard wood, and especially the expense of working it, renders the use of pine practically inevitable.—*Carpenter and Builder.*

A FOLDING secretary for exhibition at the Louisville Exposition has been made by C. E. Hillard, of Faulkner county, Arkansas, the top of which is made of specimens of Arkansas woods, so arranged as to form a map of the United States, each state being of a different kind of wood. Forty-eight varieties of wood in the state are show in the construction of the secretary.

THE foreign countries are apparently not behind the United States in the matter of making paper from wood-pulp. Germany is said to have 500 mills for the manufacture of woodpulp, in which such a degree of perfection has been reached that for the better qualities of paper, even, it is a complete substitute for rags. Wood-pulp, it is said constitutes seventy-five per cent of the paper making stock in that country.

A COUPLE of Bostonians have lately completed a machine for manufacturing half-round barrel hoops. This machine will make from twenty to thirty thousand half-round hoops per day, cutting two, three or four from a pole, as occasion requires. This branch of barrel-making is thus placed on a level with all the others in which machinery is the principal agent of construction. One of the results of the introduction of this new machine will be the utilization of ironwood saplings for hoops,—*Journal of Progress.*

VIENNA bent wood so popular as furniture for offices and sitting rooms, is, as is well known, prepared by being steamed for taking the required shape. The opposite use is suggested for a steam process to take out dents or bruises in furniture. It is recommended to wet the part with warm water; double a piece of brown paper five or six times, soak it and lay on the place; apply on that a hot flat-iron until the moisture is evaporated. If the dent is not gone repeat the process. After two or three applications the dent will be raised level with the surface.—*Journal of Progress.*

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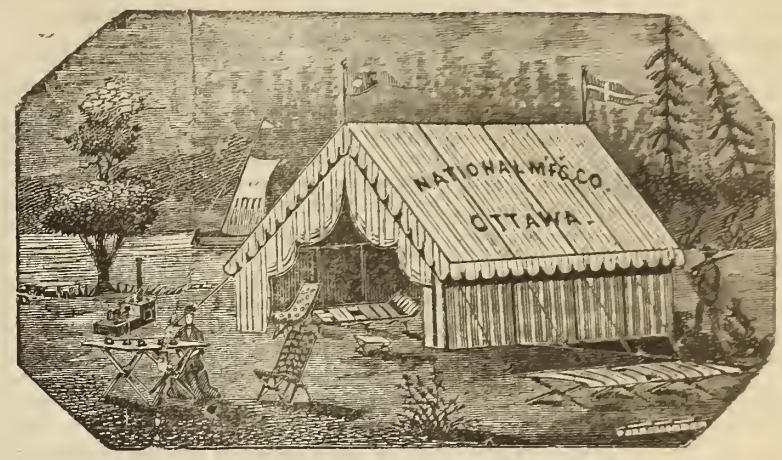

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Market Reports.

MONTREAL.

From Our Own Corresponden!

Nov. 10.—Our local market has been on the rhole very quiet since the date of our last re- ort, the weather not being very good for busi- ess, although, at the same time a good deal of imber is moving, chiefly for building purposes. 'here is no American demand at present and ot likely to be till nearer spring. Laths have ow advanced to $1.80 and is scarce at these gures, as at this season they cannot be made, nd higher prices are looked for in the near iture. Prices of lumber are unchanged and o advance is looked for, as there has been too iuch produced this season. Shipping is now bout over for the season and no more vessels ill now be here to load. We hope in next re- ort to give the total amount shipped for the eason with comparative figures for last year. 'he Forestry Association held a meeting here his week, but the attendance was small and ttle business was transacted beyond reading he annual report. Yard prices are as follows :

ine, 1st quality, ℞ M	$35 00@40 00
ne, 2nd " ℞ M	22 00@24 00
ine, shipping culls, ℞ M	14 00@16 00
ine, 4th quality deals, ℞ M	11 00@12 00
ine, mill culls, ℞ M	10 00@12 00
pruce, ℞ M	10 00@13 00
emlock, ℞ M	9 00@10 00
sh, run of log culls out, ℞ M	20 00@25 00
ass, " " ℞ M	17 00@20 00
ak, ℞ M	40 00@50 00
'alnut ℞ M	60 00 100 00
herry, ℞ M	60 00@80 00
utternut, ℞ M	35 00@40 00
irch, ℞ M	20 00@25 00
ard Maple, ℞ M	25 00@30 00
ath, ℞ M	1 80@ 0 00
hingles, 1st, ℞ M	3 00@ 0 00
hingles, 2nd, ℞ M	2 50@ 0 00

CORDWOOD.

Wood is plentiful and the demand fair, but usiness is chiefly of a retail character, and onfined to the yards which as a rule are well tocked. Tamarac is scarce, and is dearer in roportion to hardwood, prices of which have ettled down considerably. Our wholesale rices ex cartage are as follows :—

ong Maple	$ 6 00
hort "	5 50
ong Birch	5 50
ong Beech	5 00
amarack	5 00

TORONTO.

From Our Own Correspondent.

A visit to the various retail yards in the city iows trade to be fairly active, and were it not r the strike on the part of journeymen plas rers, trade would be exceedingly hrisk, and ie effects produced by this strike will not pass way with its cessation, inasmuch as several ontracts which were in the hands of the archi- ects have been entirely withdrawn in conse- uence. It is to be regretted that arbitration not resorted to to settle all such disputes etween capital and labor.

The fine open weather of the past two woeks as been favorable to shippers. Large quanti- es of grain and considerable lumber having ft our port during that time, somewhere in the icinity of 3,000,000 feet of lumber and 500,000 iingles having passed over our docks, and sev- ral more cargoes yet to get away.

Things in general are looking gloomy for the 'holesale dealer just now, some of the banks aving refused to discount good commercial pa- er, which has had the effect already of closing up ne firm, and if this absurd course on the part f our banking institutions is persisted in it is nly a question of a little time when other firms 'ill have to follow that of A. K. McIntosh & 'o. It is quite a different thing to refuse mill ien accommodation wherewith to stock up heir mills, and so continue to glut the market, nd to deny a reasonable amount in discounts o the dealer to enable him to work off to ad- antage the stocks on hand, The former course commendable, the latter unjustifiable, and nly calculated to spread disaster through all he ranks of the middlemen, If the wheels of rade are to be clogged in this manner without ny warning on the part of our monetary istitutions it is high time that a better under- tanding on the part of both were arrived at. t really seems as if the railway companies and anking institutions had leagued together to rush out of existence the ever struggling mid- lemen, and yet they are the men who have cast more money into their coffers than any other class of traders.

I have just been informed that it has been fully brought home to Mr. Robt. Kerr, of the N. & N. W. R. R. Company, as having been the leading spirit in the inovation lately insti- tuted by the various railway companies. One of our leading lumbermon called on Mr. Kerr for an explanation as to why the charge for shunting was made. He quietly and suavely remaked that another railway company deser- ved the merit due for that brilliant stroke of policy, and that of course their company were perforce compelled to follow suit. Of eourse under such circumstances the gentleman had to retire rather discomfitted, but still not quite convinced, and the thought struck him that he might as well visit the freight agent of the other company named, which he accordingly did, and after airing his grievances was handed a letter from Mr. Kerr, urging the course of action which has since been carried out.

Now, to say the least about it, this was hard- ly a manly course on the part of the N. & N. W. freight agent, and he has other faults equally as glaring as that of prevarication. For instance, when a customer calls to see him on business, and after his wants have been made known, quite unlike many gentleman in similar positions, he will continue to read over his cor- respondence, occasionally replying in monosyl- ables, and in some cases seems to become quite oblivious of his visitors presence. Now with some of the heads of dopartments in the com- pany's service it is different, notably, the super- intendent and local freight agent, with whom it is a pleasure to do business, always that gentle- manly courtesy displayed by them which com- mands respect, and if Mr. Kerr will permit us we would set those two gentlemen before him after which it would be greatly to the public liking and the company's benefit for him to copy.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℞ M	3 00
Sawn Lath	2 50

WINNIPEG.

The Winnipeg *Commercial* of Nov. 6, says : There is a still fairly active demaud, and will continue to be until the advent of winter puts a stop to building operations. The following are the quotations :—Pine lumber, 1st, com- mon boards, dressed, $26.50 ; 2nd, dressed, $25.50 ; 1st, do rough, $26.50 ; 2nd, do., $25.50 ; sheathing, rough, $25 ; timber, 16 feet and under, $24 ; do. over 16 feet, for each additional 2 feet, $1 ; dimension and joists 16 feet and under, $24 ; do. over 16 feet for each $1 ; fencing, $25 ; 2 and 3 inch batttens, $30 : A. stock boards, all widths, $50 ; B. do., $45 ; C. do., $40 ; D. do., $35 ; 1st clear. 1, 1¼, 1½, and 2 in, $60 ; 2nd do. $56 ; window and door casings, $50 ; base boards, dressed, $50 ; 1st pine flooring, siding and ceiling $40 ; 2nd do $35 ; 3rd do., $30 ; ½ inch split siding, dressed, $30. Spruce lumber —timber 16 feet and under, $22 ; do. over 16 feet, for each additional 2 feet, $1 ; dimensions and joists, 16 feet and under, $23 ; do. over 16 feet, for each additional 2 feet, $1 ; boards, $22 ; 1st flooring, siding and ceiling, $28 ; XX shingles, $5.25 ; Star A shingles, $5.25 ; X shingles, $5.00 ; A do. $4.50 ; lath $4.50.

BOSTON.

Cotton, Wool and Iron of Nov. 10, says :— There is nothing materially changed either in the volume of trade or the tone of the general market. Western pine is in good steady re- quest and values are quite firmly held, especially on good grades. Eastern lumber, pine, spruce, and hemlock are moving steadily at well sus- tained prices. Laths are held stiffly at the high prices lately current. Southern pine is in moderate and steady request at unchanged prices. Walnut, ash, oak, and cherry in choice grades are of good fair movement at well- sustained values. Our quotations are for cargo lots.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℞ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℞ M	28 00@30 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	18 00@19 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℞ M	40 00@43 00
Ash, second quality, ℞ M	25 00@30 00
Cherry, good, ℞ M	60 00@85 00
Cherry, common, ℞ M	25 00@35 00
Oak, good, ℞ M	40 00@43 00
Oak, second quality, ℞ M	20 00@25 00
Basswood, ℞ M	25 00@30 00
Hickory, ℞ M	40 00@40 00
Maple, Canada, ℞ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℞ M	35 00@40 00
Shingles, shaved, pine, ℞ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℞ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of Nov. 20th, says :—The big fleet that the frequenters of the Franklyn street sales docks expected after the great gale last week did not swell to such im- mense proportions as was looked for. On Fri- day the port arrivals of lumber cargoes number- ing 97, of which 50 to 60 were tied to the market docks, the largest single day's offering of the week. Sales were made with fair facility, so that there was less dragging than was anticipated. After Friday arrivals fell off, and but a portion of these stopping at the market, there has been no banking up of offerings and no clog in movement. Cargoes of dimension that were at all desirable have been taken soon after the vessels reached the basin ; that which was indifferent like poor No. 2 inch lumber and dimension of undesirable quality, or size, going slower. Whenever fair to good 2x4 short lengths have constituted a large proportion of a cargo, there has been no hesitancy about purchasing. As a matter of fact the better cuts of lumber are being bought up at the mills, leaving all the poor stuff to come to this market. Yet the baiting process is going on, and in each day's arrivals there are straggling cargoes of quite good lumber. Inch lumber classed as No. 2, but out of which the better grades have proba- bly been pickod before shipment, arrives here looking rather tough, and lingers at the docks, and suffers a deal of kicking and pounding be- fore it sells. Long dimension and timbers are not arriving to a great extent, and shingles are coming slowly. There is next to no Lake Huron lumber putting in an appearance. The rush for the season is subsiding. A considerable proportion of the lumber now being sawed at the east shore mills is going into pile, values not being high enough to suit the manufacturers. Yet the commission men say that lumber will come along steadily, though moderately, till the close of navigation. The total for the week ended Wednesday was 224 cargoes—not a bad showing for this season.

There is no change in prices worthy of men. tion, $9 to $9.25 being still the range on piece stuff under 18 feet in length, and much depen- dent on the desirability of the stuff and the special nature of the schedule.

Quotations are as follows :—

Short dimension, green	$ 9 00@ 9 50
Long dimension, green	9 50@11 00
Boards and strips—No. 2	10 50@12 50
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 00@ 2 10
Extra A	2 20@ 2 60
Lath	1 65@ 1 75

Receipts of lumber, shingles, etc., for the week ending Nov. 8, as reported by the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	*Shingles.*
1883	57,683,000	35,520,000
1882	47,123,000	24,128,000

FROM JANUARY 1, 1883, TO NOVEMBER 8, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	*Shingles.*
1883	1,671,097,000	1,030,738,000
1882	1,879,680,000	799,627,000
Increase		231,111,000
Decrease	208,583,000	

STOCK ON HAND OCT. 1.

	1883.	1882.	1881.
Lumber	611,369,920	660,118,942	541,763,015
Shingles	381,042,939	265,189,150	241,445,200
Lath	54,038,772	52,267,802	38,333,925
Pickets	1,661,537	3,368,270	2,758,430
Cedar posts	349,493	161,719	211,048

OSWEGO, N. Y.

From Our Own Correspondent.

Since our last report a steady and good busi- ness has been done. The weakness manifested by holders of common and cull lumber has stimulated trade, and large quantities have been sold at low prices. Dealers from the interior are stocking up ; receipts are light and the sea- son is drawing to a close. Stocks are large and a good assortment is in store for winter trade.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1½ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LIVERPOOL.

The *Timber Trades Journal* of Oct. 27 says:— The quantity of timber, deals, and other wood goods being sent into the country continues large, but without affecting prices in any mark- ed degree, as the import still keeps pace with the consumption. Buyers are no doubt stimu- lated to make their purchases now for several reasons, of which it is most likely the most prominent will be the continued low figures sales are made at, and the approaching termin- ation of the import season for Canadian and Baltic goods.

Spruce deals do not show signs of improve- ment in value yet, but with a greater scarcity of vessels, and termination of the time when deckloads are permitted, which has now nearly elapsed, it may not be far distant.

The failures reported to have taken place amongst the Swedish shipping houses will not affect this market, as the redwood business in Liverpool is only of secondary importance. Whilst on this subject it may be mentioned that a cargo of about 300 standards of deals from St. Petersburg has just been landed here, which show a decided improvement upon previous shipmeuts from that port, the bracking having seriously deteriorated during the past few years. The new shipment appears to be satisfactory to the buyers, and will probably lead to a resum- ption of business in this shipment.

Graving Dock at Quebec.

A new graving dock is being rapidly con- structed on the Quebec side of the river. It is

situated near Wolf's Cove, upon the property of Mr. Roche adjoining his steam saw mill. Mr. Roche has possessed, for a considerable time, excellent facilities for repairing ships and steamers, and is now, with commendable enterprise and a very considerable outlay, adding to these facilities by the building of a new dry dock, destined for the reception of steamships of the very largest class.—*Montreal Gazette.* The establishment of Mr. Roche, at Quebec, is one of the most important in Canada, comprising as it does extensive square timber booms for the dressing and delivering of timber intended for the English market, also large saw and planing mills, and a ship repairing yard of unequaled facilities on this continent. This last enterprise of Mr. Roche, is a huge one, and when completed will enable large iron steamships to be thoroughly repaired on this side of the Atlantic, which has been hitherto impossible.—*Ottawa Citizen.*

New Lumbering Company.

Mr. K. N. MacFee, who has been absent from this city about three months, has returned, after forming a syndicate of lumbermen at Eau Claire, Wis., for the manufacture of lumber in the Bow River country. The company is known as the Eau Claire and Bow River Lumbering Company, and it is organized under the laws of Wisconsin and formed for the manufacture of lumber in a section of country embracing 450 miles of territory on the Bow and Kannanaskis rivers. The syndicate numbers 16 members and includes Messrs. H. O. Ingram, President of the Empire Lumbering Company; J. G. Thorpe, President of the Eau Claire Lumber Company; W. A. Rust, vice-president of the same; J. C. Putnam, banker; H. M. Stocking, J. K. Kerr and F. C. Holman, of Eau Claire; and A. Bruce of Chippewa Falls. The capital stock is about $500,000. A mill to cost $75,000 will be erected at Calgary. Mr. MacFee will be manager of the company in Winnipeg.—*Winnipeg Times.*

A Lumber Railway.

The *Lumberman's Gazette* says—:The line of the Flint & Pere Marquette railroad has been extended to Houghton Lake, and is now open for business. The territory is heavily timbered and will afford the road an extensive traffic. On the Harrison branch 30 miles long, there are upwards of thirty miles of spurs, from half a mile to six miles long. The lumber traffic of the Flint & Pere Marquette, particularly in the transportation of logs, has been very great. Up to the first of October 115,000,000 feet of logs had been hauled to the mills and booms in Saginaw and adjacent towns. One can better judge of the enormous mass of timber these figures comprehend by understanding that it made 4,607 carloads hauled in 1,400 trains. The amount of the log traffic will probably reach 140,000,000 feet by the close of the year against 105,000,000 feet last year.

International Forestry Exhibition.

The *Timber Trades Journal* says:—In reply to several inquiries from intending exhibitors at the forthcoming Internationl Forestry Exhibition, we may state that the committee of which Mr. George Cadell is the secretary, has its office at 3, George IV. Bridge, Edinburgh. All further particulars may also be obtained from the London agent for the Exhibition, Mr. W. H. Rider, at the office of this *Journal.*

Sale of Timber Limits.

The following timber limits in the Georgian Bay, belonging to James McLaren and others, are reported sold:—Limit 48, sold for $30,000 to Thomas Kenny and also limit 56 for $36,000; limit 63 to James Worthington for $24,000; limit 64 to Thomas Kenny for $5,200; limit 72 to James Worthington for $5,000. The sale in all amounted to $110,700.

The Belleville *Intelligencer* of Nov. 1, says: A raft of ten drams of timber belonging to the Ontario Lumber Company, made at Belleville, and on Tuesday in tow of the Ontario, for Quebec, broke above Collinsby. Five drams were completely wrecked; the other five were towed into Collinsby. The loose timber floated to the bay, and has since been picked up all right.

REVIEWS.

FORESTRY.—We have received the September number of *Forestry*, a monthly magazine edited by Mr. F. G. Heath, and published by Wm. Ryder & Son, London, England. Among the prominent articles is a further contribution by Mr. Jas. Little, of Montreal, on "The Alarming Destruction of American Forests," a warning that is worthy of attontion on both sides of the Atlantic. Other articles deal with "A School of Forestry in England," "Excursion of the Scotish Arboricultural Society," "The International Forestry Exhibition," "Forest Rambles in Madeira," "Epping Forest and its Management," "Forest Work for the Month," &c., &c.

A QUERY ANSWERED.—People often ask when is the best time to take a blood purifier? We answer, the best time is now. Burdock Blood Bitters does its work of purifying, regulating, and toning the system at all times and all seasons. Purity in all things is always in order when required.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.

GRATEFUL—COMFORTING.

EPPS'S COCOA

BREAKFAST.

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*

Made simply with boiling water or milk. Sold in tins only (¼-lb. and lb.) by Grocers, labelled thus:

JAMES EPPS & Co., Homœopathic Chemists,
1yL21 London, England.

HILL'S English Extract of **BUCHU,** One of the Best **KIDNEY** INVESTIGATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder. PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

PRICE, $1; or, Six Bottles for $5.

☞ Send for Circular. Sold by all Druggists.

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Manufacturers of Best Quality Steel, Files, Saws & Crucible Steel Castings.

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Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

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White and Yellow Pine Lumber and Timber.

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AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES. 1yL20

PRESERVING FORESTS AGAINST FIRE.

Whenever it is possible leave the trees standing in blocks. Between these blocks the land should be kept under cultivation by the plow, or pastured so closely as to prevent any grass from growing up and standing in high tufts, for such would enable the fire to run over the ground, and thus carry it from one block to another, to the destruction of their trees. The size of these blocks ought to be as small as possible; as a general rule, we would limit them to five to twenty acres, and never let one exceed fifty acres. The cultivated division between these should vary in breadth according to circumference, to be dicided upon by a government surveyor. As western winds are more generally prevalent during a dry time, when forests are most liable to be fired, the space ought to be broader betwcen the eastern and western lines than the southern and northern. As wood and timber are cut, they should be hauled out from the woods and piled on or ncar the centre of these spaces, and then, in case of fire, these at least would be saved from destruction.

Before commencing lumberiug in the forests, or clearing for cultivation, the tract of country subject to this ought to be surveyed, and the spaces lined out to be first cut over, and all the bush cleaned up and burned before dry weather sets in. In some instances, these spaces could be left safely to grow up a new forest, but it would be better to put them under cultivation or into grass. If suitable blocks of forest were left standing, the thinnings of these would go far to supply the country with a sufficiency of lumber. As soon as a tree here had attained a proper age and size, it might be cut down, hauled out, and turned into lumber, as is done in many of the European forests. This gives the younger trees near where they stood a chance for a better and more rapid growth, thus keeping the blocks up for a never failing supply of wood and timber for the annual wants of the country.

Forests are set on fire by so many various ways, that neither guards nor laws, however strict, can entirely prevent them. These are mainly done by hunters, picnic parties, brush burning, sparks from locomotives, or depraved people, delighting in the wanton destruction of valuable property belonging to others. The preservation of sufficient areas of forest where now standing, and the planting of others were needed, are important considerations, not only for our own United States, but for the whole continent of North and South America. This should now be made both a state and national subject, by passing such laws, and strictly enforcing them, as shall ensure them being properly cared for; and when we have done this for our own region of the western hemisphere, let us use our influence to have the same thing accomplished, where not already done, in all other portions of the American continent.

Fire and lumbermen are annually making a shocking waste of our forests. It is fully proved now, that where reservations havo been made of blocks from them by farmers, on the first settlement of their lands, the thinnings from these blocks for fire-wood, fencing, and lumber, have been more profitable to them than the crops gathered from the land entirely cleared up for cultivation; and the wooded portions of the former now are worth and would readily sell for two to five times the price per acre of the latter.

GROWTH AND AGE OF TREES.

We are apt to underrate the possible rate of growth where a tree meets with altogether favorable conditions. The silver fir was only introduced into England in the seventeenth century by Serjeant Newdigate; and one tree of his planting was 13 feet round when Evelyn measured it 81 years afterwards. A comparison of the statistics of growth, as above collected with reference to the oak, indicates with respect to most trees a more rapid rate than is generally supposed. Let us test the claims of some of the oldest limes. The Swiss used often to commemorato a victory by planting a lime tree, so that it may be true that the lime still in the Square of Fribourg was planted on the day of their victory over Charles the Bold at Morat in 1476. A youth, they say, bore it as a twig into the town, and arriving breathless and exhausted from the battle had only strength to utter the word "Victory!" before he fell down dead. But this tree was only 13 feet 9 inches in 1831 (*i. e.*, 355 years afterwards), and it would be extraordinary if a lime had not obtained in that period greater bulk than even an oak might have reached in a century. The large lime at Neustadt.in Wurtemberg, mentioned by Evelyn as having its boughs supported by columns of stone, was 27 feet when he wrote (1664), and in 1837 it was 54 feet, so that within a period of 173 years it had gained as much as 27 feet. Consequently, making allowance for diminished growth, we may fairly assume that 200 years would have been more than enough for the attainment of the circumferenco of the first 27 feet which it had reached in the time of Evelyn. No English lime appears to have reached such dimensions as would imply a growth of more than three centuries, though the lime of Depeham, near Norwich, which was 46 feet when Sir Thomas Browne sent his account of it to Evelyn, sufficiently dispels the legend that all limes in this country have come from two plants brought over by Sir John Spelman, who introduced the manufacture of paper into England from Germany, and to whom Queen Elizabeth granted the manor of Portbridge.—*Scottish American.*

Spruce and Hemlock.

The Chicago *Northwestern Lumberman* says: The eastern spruce trade is in a healthy condition. When the combination of spruce lumber manufacturers was formed some time ago there was no faith in the eastern markets that it would amount to anything. Some of the members of the organization cut prices as of old, but in order, seemingly, to make them stand up to their word, Providence stepped in and shut off the rainfall. There has not been water enough to float logs to any advantage and not enough to run the water-power mills. The result is that the production is greatly diminished, and prices are fairly sustained. Had it not been for this assistance which nature rendered there is no knowing how low values would have dropped. The pine lumber manufacturers of the Northwest may draw a lesson from this if they see fit. The markets will go into the winter with only moderately sized stocks of spruce on hand; the mills will have nothing to speak of in pile, and consequently the outlook for the coming year is brighter than it would otherwise be.

There is a good demand for hemlock in Pennsylvania at a reduction, in most markets, of $1 per thousand from last year's prices. The cut of the hemlock mills is increasing, but there is little prospect that the production will become burdensome, for with the difference there is in the price of pine and hemlock the people in the East find it to their interests to use the latter wherever practicable.

T. SHEPPARD, the manager of the Rainy Lake Lumber Company, at Port Francis, Man., says the company has rafted at present enough red and white pine logs to make 18,000,000 feet of lumber. Owing to the recent destruction of the company's Rat Portago mill very little of the amount will be cut this season. There is some white oak in the Rainy Lake region, but the birch, maple and other varieties are usually of poor quality. The land of the Rainy Lake region is of a rich sandy loam, with clay subsoil, and is easily cleared of timber. There has been an important agricultural effort in that region this year, and there is a good local demand for farm products. Port Fraucis is a town of about 50 houses, and is mainly maintained by the Rainy Lake Lumber company and the Hudson Bay company.

Falling Leaves.

"There is something inexpressibly touching in the fallen leaves," sighs an esteemed author. There is, there is, indeed. It's when you slip on one of the articles on a wet morning, and touch the unsympathetic pavement. But there is in reality touching language—language uttered from the heart, yes, from the depths of the soul, in the many thousands of testimonials and letters (unsolicited) that come from those who once were sufferers from lung diseases, asthma and consumption, and who have used N. H. Downs' Vegetable Balsamic Elixir, and have been restored to their wonted health and activity.

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File Manufacturers

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FILES FOR SALE. FILES RE-CUT

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LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills

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Established 1874.

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Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

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Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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Lumbering Season, 1884

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Cheap!

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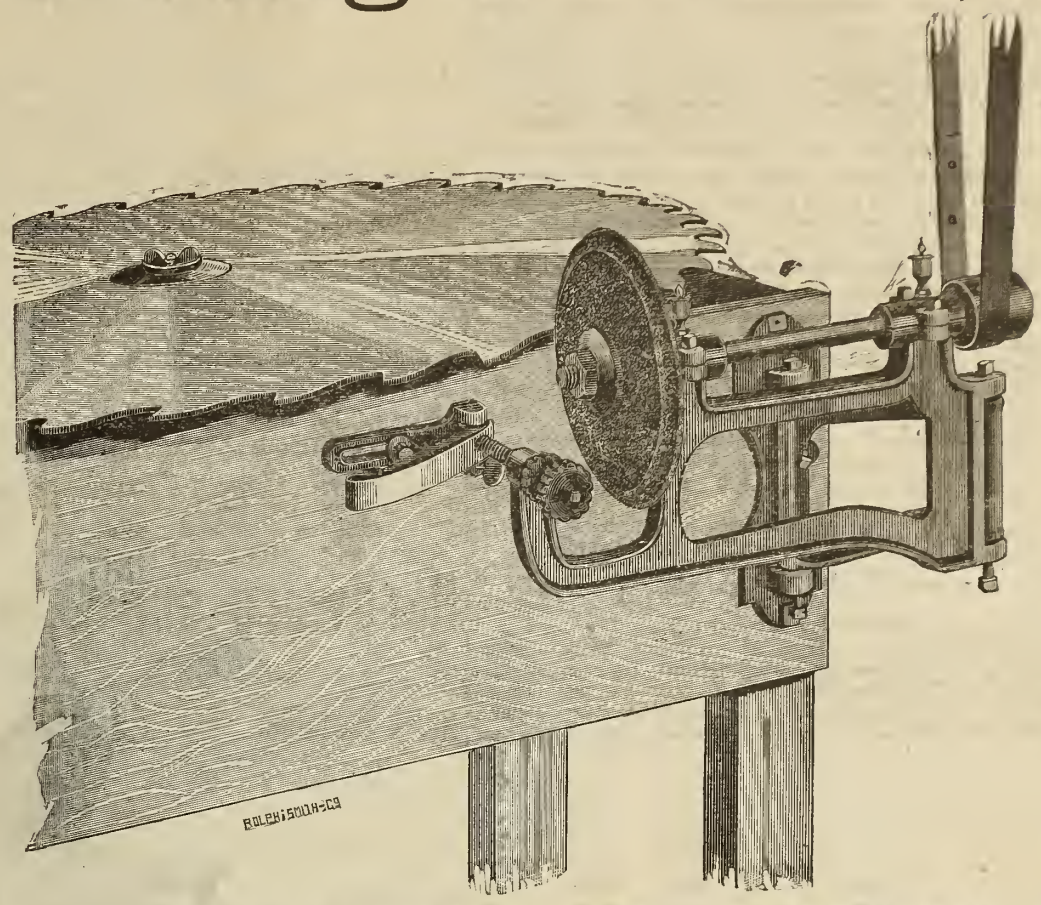

Accurate!

Works Fast!

Complete!

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SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of RGERS' AW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensibles in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONEN PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

THE LUMBER TRADE.

The state of the lumber market is tolerably satisfactory. Purchases have been made by country dealers for the most part cautiously and sparingly, and as a consequence the stocks in country yards are light. Although the demand from across the lines is at present more slack than is usual at this season, there is no serious accumulation anywhere, for the reason that no more was cut las season than is likely to be needed.

Some enquiry is heard for the better grades of stock, which are scarce among our American neigebours, and are thersfore firmly held here ; while, on the other hand, the coaser qualities of pine wood are plentiful and easier in value. With respect to production, the opinion is free-expressed thao only light stocks will be taken out of the woods this year. It is perhaps significant of restricts out-put and a lessened demand for labor to learn that saw mill hands, which were paid $18 to $20 per mhnth, were engaged las week at $16, and offered this week at $14. To offset whatever difference in the cut might be occasioned by the burning of the Gilmour mill, the British Canadian mill and others destroyed of late, we find that two or three new mills have been built pretty well north on the Georgian Bay. And there is, besides, less disposition on the part of the banks to make advances to a number of small operators.

As to prospects for the winter, if the weather continuer open building operations will be fully up to an average in extent, although the plasterer's strike in this city, affecting the market for that class of labor in Guelph and Hamilton as well as here, has put a damper on the plans of some intending builders. Already there is a good deal of activity in this direction, and appearances indicate a fair demand for all classes of building lumber for some months to come.—*Monetary Times*,

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Sept., and for the first nine months of the year :—

MONTH ENDED 30TH SEPT., 1883.

Timber (Hewn).	*Quantity. Loads.*	*Value. £.*
Russia	39,620	81,291
Sweden and Norway	79,919	127,779
Germany	51,725	115,728
United States	9,669	33,559
British India	2,321	37,219
British North America	41,702	216,167
Other Countries	26,692	34,387
Total	251,648	646,130
Timber (Sawn or Split, Planed or Dressed).		
Russia	226,868	537,440
Sweden and Norway	252,490	557,164
British North America	159,801	418,666
Other Countries	43,344	132,462
Total	691,903	1,645,732
Staves, (all sizes)	21,227	83,590
Mahogany (tons)	3,212	41,280
Total of Hewn and Sawn	943,551	2,391,862
NINE MONTHS ENDED 30TH SEPT., 1883.		
Timber (Hewn).		
Russia	224,624	445,857
Sweden and Norway	470,893	743,553
Germany	264,013	681,504
United States	95,471	357,486
British India	36,660	518,909
British North America	211,767	1,021,388
Other Countries	286,886	386,865
Total	1,590,314	4,155,562
Timber (Sawn or Split, Planed or Dressed).		
Russia	797,657	1,832,163
Sweden and Norway	1,285,520	2,897,662
British North America	765,693	1,948,727
Other Countries	278,244	897,853
Total	3,127,114	7,576,405
Staves (all sizes)	102,600	444,486
Mahogany (tons)	33,996	345,668
Total of Hewn and Sawn	4,717,428	11,731,967

LUMBERMAN'S DIRECTORY.

The well-know publishing house of Rand, McNally & Co., of Chicago, announce the early publication of a book which will be of a great importance to lumbermen, and all interested in obtaining the names and correct addresses of the owners or operators of saw, shingle, planing or stave mills, sash and door factories, and lumber dealers. It is to be called "The Lumberman's Directory and Shipping Guide," and besides a complete list of mills and dealers in the United States and Canda, it will give the names of all railways or express companies by which the various cities and towns, where the above interests are located, may be reached together, with colored maps of each state, territory and province in the United States and Canda, which will show the line of every railroad. It will contain statistical diagrams, similar to those used in Rand, McNally & Co's famous World's Atlas, which will illustrate the quantities of white and yellow pine timber remaining in the country, annual production, range of prices, etc., digests of the laws of mechanics' and log liens, laws governing the cutting of timber and use of streams for driving logs, with decisions of the courts, etc. It will be a very large volume, containing something like six or eight hundred pages of matter very valuable to lumbermen, or those who deal with them. The reputation of the great publishing house of Rand, McNally & Co. is sufficient guarrantee that the work will be well and thoroughly done. A prospectus or descriptive circular, with specimens of the maps and various pages, may be obtained by the publishers.

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Nov. 9 :—

	1881.	1882.	1883.
Waney White Pine	3,015,594	3.104.648	3.513.515
White Pine	5,640,029	7,961,695	7,130,419
Red Pine	1,921,898	1,156,850	474,458
Oak	2,948,295	1,313,109	1,888,294
Elm	1,027,459	714,549	309,261
Ash	408,582	310,769	257,827
Basswood	3,939	1,471	2,244
Butternut	3,033	2,639	1,028
Tamarac	27,150	51,975	7,409
Birch & Maple	151.742	269,661	138,803
Masts	25pcs	33 pcs	—pcs
Spars	— pcs	51 pcs	— pcs
Std. Staves	404.9.1.2	513.7.0 6	677.3.0.15
W. I. Staves	499.0.1.10	1298.8.3.28	619.2.3.20
Brl. Staves		76.2.3.6	115.3.0.16

JAMES PATTON,
Quebec, Nov. 9. Supervisor of Cullers.

A WRONG OPINION.—Many a dollar is paid for prescriptions for some disease that never troubled the patient, and when the sole difficulty was worms, which a few of Freeman's Worm Powders would remove. These Powders are pleasant, safe and sure, contain their own cathartic, and are adapted for children or adults.

BAD DRAINAGE.—There is nothing more productive of disease in a neighbourhood than bad drainage. Open the culverts and sluiceways and purify the locality. The objections in the human system may be remedied in a similar manner by Burdock Blood Bitters, which opens all the outlets of disease through the Bowels, Liver and Kidneys.

$72 A week made at home by the Industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably, Address TRUE & Co., Augusta, Maine.

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Stands far in advance of any other Canadian Paper.
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It has the Largest Circulation ; the Latest News, both Local and Foreign. A Splendid Story Page. First-class Agricultural Page. Reliable Market Reports. Legal Column Household Department, Children's Department, etc.

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MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,
Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR 1yL'1
"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

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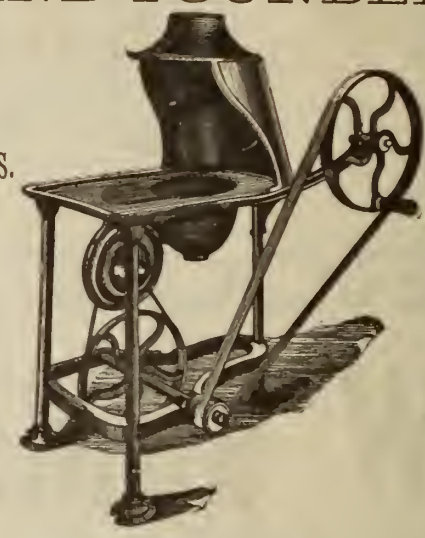

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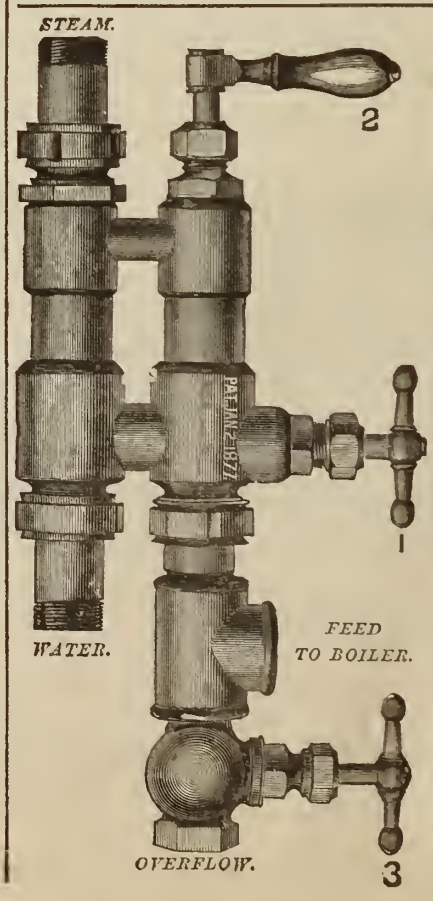

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3. It furnishes complete and reliable quotations of prices of lumber in all the leading markets.
4. Its columns are filled with interesting reading matter, valuable alike to the land owner, manufacturer or dealer.
5. It costs only $2.00 per year to have it sent, post-paid, to any address in Canada, and no land owner, lumber dealer, manufacturer or individual in any way connected with timber industries, can afford to do without it.

☞TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

———CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM———

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion

The William Hamilton Manufacturing Co'y

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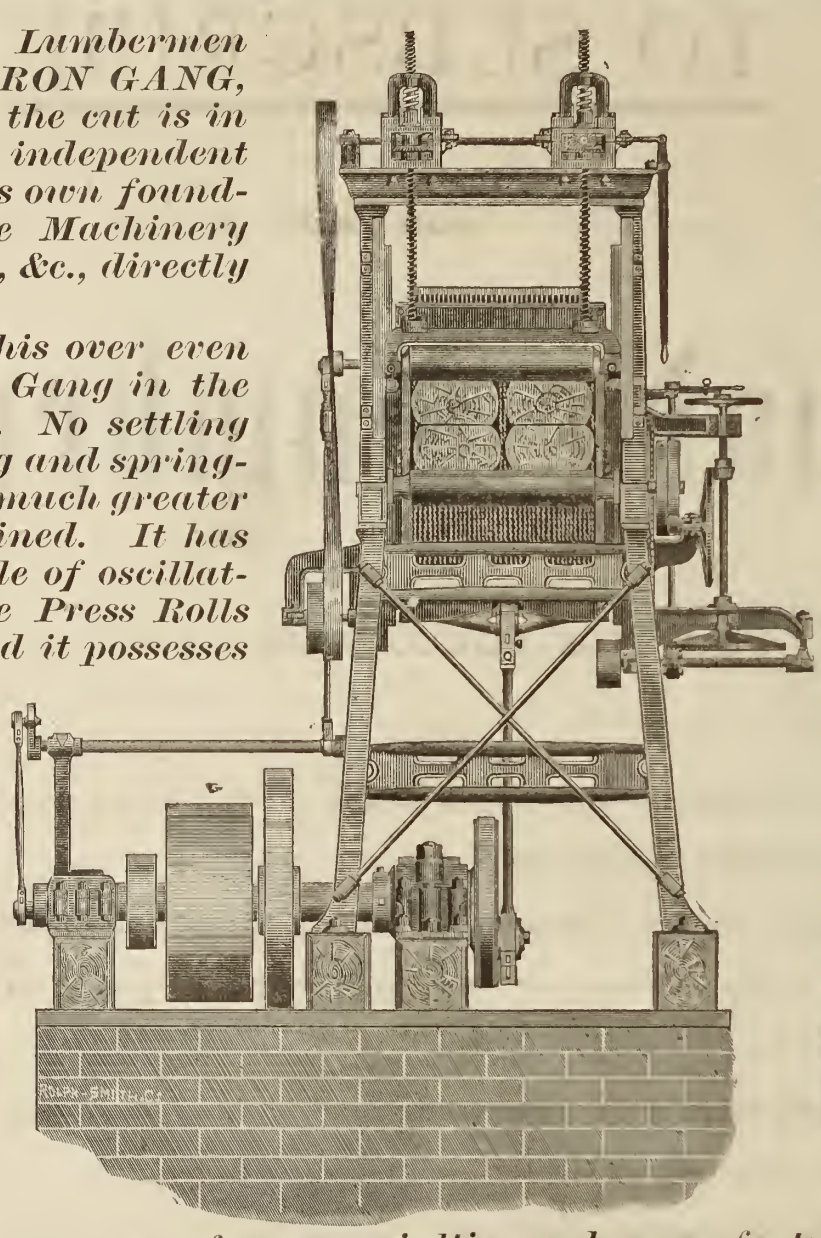
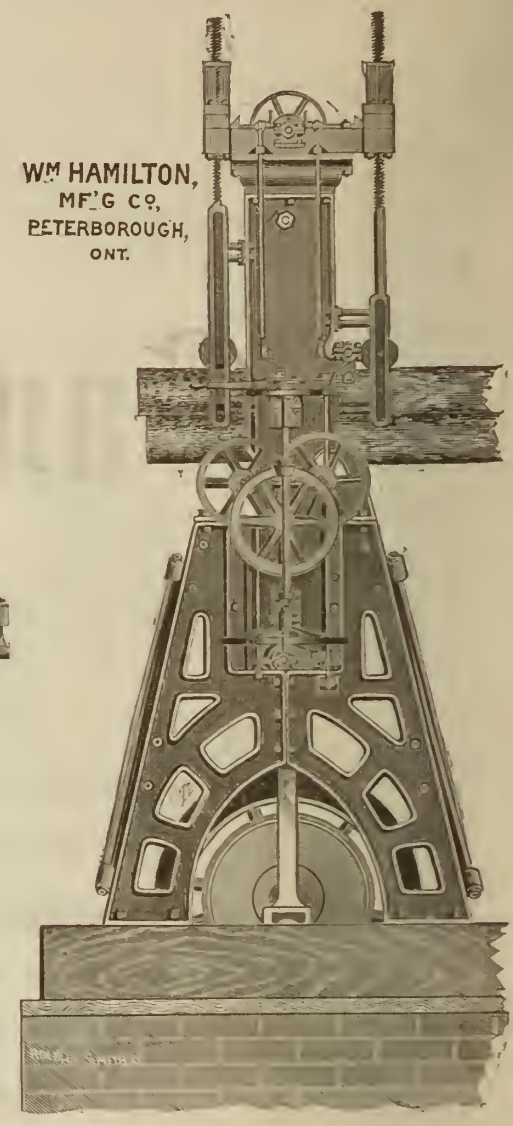
PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

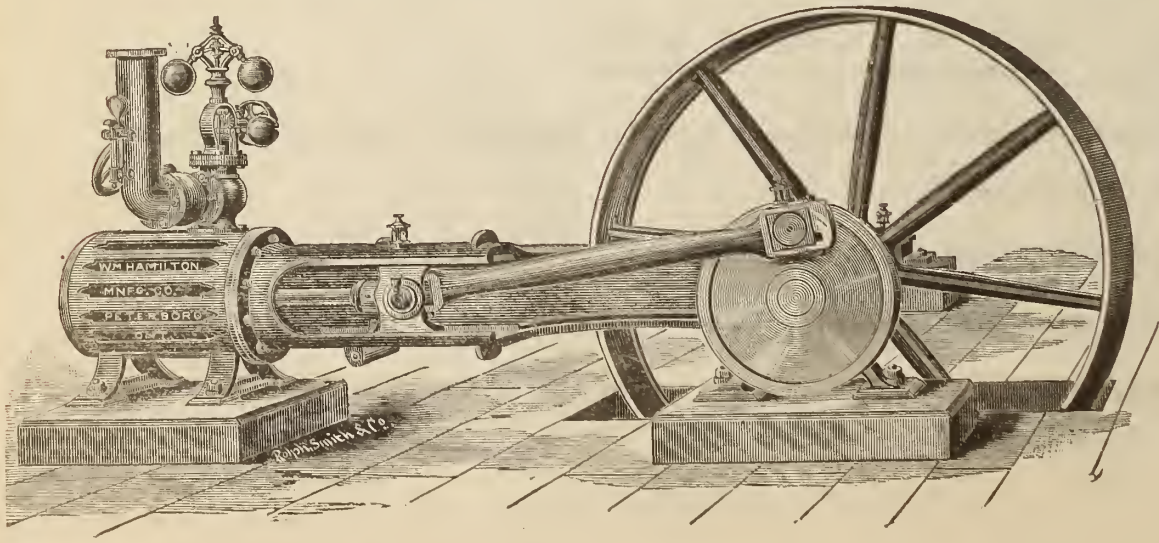




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

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VOL. 3. PETERBOROUGH, ONT., DECEMBER 1, 1883. NO. 23.

WHICH WAY IS THE MARKET TENDING?

The *Timber Trades Journal* of Nov. 3, says: If any inquirer doubts the activity of the timber trade of the United Kingdom in a general sense, we commend to him the perusal of the provincial reports in our last impression. It is true they are not all equally favorable, but he would probably rise from the investigation with the impression on his mind that, whether people were getting money by it or uot there was certainly a great deal of business doing.

Liverpool has been for some months past on what may be termed "the croak," on account of the importation of wood goods being much in excess of the demand; but a more hopeful tone then began to prevail. Large quantities of goods were going away into the country, and the worst that could be said of the market was that "the imports kept pace with the consumption." So it will be admitted they ought to do, at this time of year, and something more, else where would be the stock to carry the building and other trades on till next season came around? There was no further retrogression in the price of spruce at the public sales, and it was admitted that buyers were coming forward more readily than had been their wont of late, for which sufficient reasons were assigned, chiefly in the tempting prices at which goods were to be secured, and the approaching close of the import season, when they will no longer be obtained so cheaply. Birch timber and sawn pitch pine, but especially the former, fetched fair prices, and showed that there were plenty of buyers still in the market.

Hull reported diminishing arrivals, but plenty of deliveries, as "the railway company and the river sloops were very busy." The same state of things was also announced from Hartlepool, which was "enjoying in most departments of the trade a fair amount of work;" and what can be pleasanter to record than this? "A very fair trade is doing in sawn wood goods, which are mostly going out of the stocks in the yard. A large number of orders for deals, battens, and floorings are daily loaded up, and are evidently intended for immediate use among joiners and builders, as distinguished from the huge quantities sent from time to time ex ship into the interior for stocking purposes;" and the saw mills of the neighborhood were said to be working very briskly.

No slackness of business, excepting in the import department, is reported from Grimsby, Sunderland, or Newcastle, and the abatement of the supply is likely to stimulate the demand. Only mining wood seems to be in excess about those regions, and a fair trade was doing in timber with the ironworks, collieries, and manufactories around. Leith was by no means overstocked, and the importation was slackening, while at Glasgow, which, as we stated last week, has been importing very freely, the prices realized at the public sales were such as to make a London importer's mouth water. Quebec 3rd pine deals of good sizes fetched £11 to £12 per standard at Messrs. Singleton, Dunn, & Co.'s sale of the 18th Oct., and Michigan, 1st £26 to £27, and 2nds £20 2s. 6d. at the sale by Messrs. Edmiston & Mitchell on the 24th—prices unknown to the London market, even when times were much better, and indicating that there is great life in the trade, notwithstanding the abundant rate of supply that has hitherto prevailed, and the expectation of a good deal more to come forward before foreign shipments cease for the year.

If we had only these reports before us, the unpaying prices of the London public sales would seem unaccountable, but other bodements are singing in the winds which it would be imprudent for the trade to ignore. An increasing number of vessels, our stockholm correspondent tells us, are arriving to load at the lower Gulf ports, and it is already preceptible that a considerable number of ships are still afloat, timber laden and destined for these islands, as well from America as from Europe. A single sentence sometimes divulges more than a whole column of beating about the bush; and such we find in the Cardiff report of last week. A number of market cargoes were then and there announced, with the following information added:—"Some have gone to Bristol, others to Sharpness, and some have been taken in here to be landed, we understand, for shippers account." Coupling this with the Swedish statement (under date of 20th October), wherein our correspondent expresses his belief that the fall shipments from the Gulf ports "will reach very near an average, in spite of assertions to the contrary so frequently heard a month ago," it may be safely inferred that there is yet a good deal of timber produce to come forward, and that the trade will be fortunate if it is not burdened with something more than an average fall importation ere the setting in of winter closes the timber shipping season. It is satisfactory though, in the midst of its unwonted importation, that the retail trade of Cardiff continues in a prosperous state, as confirmed by the following sentence:—"Retail business is very brisk; all our timber merchants are exceedingly busy, sending away as fast as they can deliver, and we hear of nothing but contentment regarding the trade." What more could be said, if we were in the midst of those good times which are always coming but never acknowledged till a succession of commercial disasters undeniably prove to us that they have just gone by.

Last week we traced briefly the progress of importation throughout the land, in comparison of 1882, and on the present occasion we have attempted to show what kind of markets the goods had come to; and so far from finding it in a normally depressed condition, there are not wanting evidences that it is maintaining its ground, and even going ahead through all the countervailing influences which were acting to its disadvantage, and were it for the rest of the year restricted to the legitimate business of buying abroad and selling at home by the established houses in the trade, there is nothing to show that is not in the way to a measure of prosperity quite equal to that of any period in the best records of the past.

The worst sign of the times may perhaps be found in these market cargoes, which are the bane of an established trade. When firms have imported all that they are likely to require for the connection they rely on, and by which they expect to realize a fair profit, nothing can be more vexatious than to see the cut from under them as it were by a crowd of cargoes sent into their port on speculation, which they have either to buy, at some inconvenience probably either as to money or space for storage, or to allow to be sold piecemeal to the very customers on whom they depended, to relieve them of the stocks they had already imported.

Money is however easy, and trade is evidently in good heart as a whole. Only in London do we see sacrifices made, which are quite inconsistent with the state of trade elsewhere; and even in London, should the supply not very much exceed moderate bounds, it will surprise nobody to witness a great change for the better, before the end of the year.

TAPER GROUND SAWS—THIN SAWS.

The majority of all millmen and filers know but little of the changes that have been made in saws in the last twenty-five years. When the circular saw was first introduced no one knew anything about hammering them open; it was thought the stiffer the plate the better. Then they were all made straight guage. Following came the taper ground saw, which has been in use twenty years, and is still in use by majority of mills. Now I would like for some one to bring proof that it is better to have the plate thicker in the centre than elsewhere, and convince me of any benefit to be derived therefrom. It would be much easier to convince me that I am wrong than to convince the great number of mill-men who are using taper saws that they are wrong. Since the motion of circular saws has been increased, the extra steel in the centre is a detriment instead of benefit. It is well known that a saw will not run well when it is stiff in the centre. I would by all means prefer it thinner there than otherwise. My reasons are these: First, a straight saw will run with less set; second, it requires less hammering to put the saw in good coudition for running. The less set the less power it takes to drive it, the lighter it cuts, and the less liable it is to buckle and dodge. Everything that will lighten the running of a saw should be sought for by all interested in its use. For a long time there were but few changes made, but within the last five years there has been much discovered that nearly doubles it capacity. And other things, when better understood, will add to this efficiency 25 per cent more than is now realized by the majority of mills.

Many mills are now running thinner and straight guage saws. Some are making a success of straight 8-guage 60-inch, and some do well with 10-gauge 72-inch. I have faith and confidence that five years hence 10-gauge saws will be run with as much success as 8-gauge saws now.

This using of thin saws is a subject of much interest to all persons engaged in the manufacture of lumber. Timber is becoming too scarce and expensive to waste 25 per cent of it in sawdust. All that can be saved by the use of thin saws over thick ones is clear gain. Many try to run thin saws, but fail for lack of knowledge how to run them and how they should be made. There are several causes why millmen are not running saws three or four gauges thinner than those now in use. Thin saws can be run if they are properly handled. One prominent cause of their failure to run satisfactorily is in not having the proper number of teeth. It is not all in filing; much depends upon the hammering of the saw. I have seen 10-gauge 72-inch saws run in hardwood and carry as much feed as as was carried ten years ago in soft timber by 8 gauge, and with good results.—*M. Covel.*

Conversion of Prairie into Forest.

Attention has lately been called to the fact that the numerous small prairies that were common in the Wabash basin at the time of its first settlement have become transformed into woodlands, and that owing to this gradual change of prairie to forest, the actual forest area of some of the counties of Southern Illinois is greater at present than fifty years ago. Extensive woods of oak and hickory more than eighty feet in height, and with trunks of nearly two feet in diameter, are now growing on what was open prairie within the memory of some of the present owners of the land. This is interesting as a slight indication of the solution of the mystery which involves the origin of the prairies; while the rapidity with which these new woods have spruug up, shows that the reproduction of our failing forests can be accomplished in a shorter time than is generally supposed, if proper consideratiou and attention can only be given to the subject.—*Lumber World.*

A Small Fortune at Twelve.

By the sale of timber limits on Saturday last, at Ottawa, from which the sum of $37,000 was realized, a young boy 12 years of age, named Taggart, becomes the possessor of about $15,000 in cash, besides a very valuable farm. He is a sou of the late Mr. Taggart, lumberman, Pembroke, who died seven or eight months ago. Young Taggart is at present in attendance at the Pembroke public school.

THE DEMAND FOR OAK.

Ten years ago it would hardly have been admitted by dealers who handled Michigan and Indiana oak that in a decade there would be a thinning out of the "monarchs" of the forest that a scarcity would be felt. Oak was in too great abundance in some sections of those states to suit the fancy of the owners of the land upon which it grew. Much of it was cut simply to get it out of the way, and the owners of it thought they were fortunate if they could sell it to mill men who would cut it, and thus, themselves, be saved that trouble. There was less call for it then than now. As the building of railroads has increased, the demand for oak increased proportionately, until now the once great oak states, Michigan and Indiana, can not justly lay claim to being called such. Oak in those states has not boomed in price like walnut—it is not an excessive price that bars a supply—but heavy contractors are looking elsewhere for it for the very reason that they are obliged to. There is a large amount of Tennessee and Kentucky oak, upon which heavy freight rates are paid, distributed from the Chicago market, and the amount coming forward from those states will increase year by year.

Fashion has little to do with the use of oak. From the start it has demanded to be used, and it holds its place with a grip as strong as the wood itself. The two kinds of pine may jostle each other; whitewood may take the place of white pine; walnut may be crowded out by the other kinds of hardwood, and often by soft woods; in fact, most of the woods, in their uses, are subject to the caprice of taste, but oak stands sturdily by and refuses to yield. For cars, staves, agricultural implements, for a hundred and one things, in fact, it must be had. The discovery of forests of other woods does not affect its value. There has never yet been any material discovered or invented that will take its place, and we feel tolerably safe when we say there never will be. It is one of the few indispensable woods.

We doubt if to-day there is a market in the world that is not demanding good oak. Throughout the foreign countries the call is so large that it cannot be filled. English car builders are buying car sills on track in Canada, and their operations would be extended to the States if they could find responsible parties with whom to make contracts. The inspection is severe, and that stands in the way of the American manufacturer, for, as a rule, he does not like to be bound by specific specifications. He delights to take a go-as-you-please gait and the result is that his lumber often is not up to the requirements of the purchaser. The exact methods of the white pine manufacturers of the Northwest he has not learned.

The oak of Arkansas, Mississippi, Tennessee and Kentucky will in large part, in the shape of timber and staves, find its way to southern ports, and thence to Europe. On the Mississippi river and its tributaries the stave business is picking up, and with cheap water transportation to New Orleans, the business will not only be a large one, but it ought to be very profitable. On the same rivers the getting out of oak timber for the foreign market will become a large business, spurred on by northern push and capital. Alabama, we believe, is yet destined to send a good deal of oak abroad. Some of the English dealers object to the oak of that state, but they must overcome some of their objections, for to get all the oak they want from Canada and Michigan is out of the question. There is certainly no tougher oak than grows in the South, and this quality is the one needed.

Red oak, a few years ago thought to be worthless, is no longer despised. Its value has become known, and the uses to which it will be put will increase. That the manufacture of it into staves for the West India market will grow into an important industry admits of little question. Taking everything in consideration, the owner of oak stumpage ought not to feel that he has a very big elephant on his hands.—*Northwestern Lumberman.*

THE St. John *Telegraph* learns that the Government of New Brunswick is preparing to have the province represented at the Forestry Exhibition in Edinburgh next year.

THE LUMBER TRADE OF RIGA.

From an article in *Le Marchand de Bois* on the lumber trade of Riga, Russia, we take the following: Of the ports of the Baltic provinces, Riga exports more lumber and timber than all the others, consequently a statement of the amount of this trade done at Riga will give some idea of the extent of the lumber trade of Russia in Europe. The details of the exports of Riga for a series of years from 1871 to 1882, are taken from a recent official document issued from the bureau of commerce. The timber and lumber reaches Riga by the Duña and its tributaries and comes from the provinces of Lovonie, Esthome, Courlande, Mahiten, Minsk, and Sithuanie. Notwithstanding the extensive devastation of the forests, carried on with no assurance of their renewal, the vast forests which formerly covered these provinces yet contain large reserves of timber of the best quality, but their continued depletion with no provisions made for their future restoration should give serious apprehension. The transportation of the wood from the forests to the rivers, which is made by log waggons during the snows and frosts of the winter season is attended with increased difficulties and costs when the winters are usually rainy, which are quite common; and the transportation by water is also difficult on account of the shallowness of the waters and strength of currents; and, additional to this it is peculiarly difficult to safely run the rafts which are constructed to suit the special navigation of the streams. The large timbers are bound together and form the raft proper. On these are then placed laths, staves, clapboards, etc. It is said the manufactured stuffs brought to market in this way are limited in quantity. This is to be regretted as persons who are acquainted with the interior of Russia state that it would be much to the interest of the proprietors if they would put more on their places in the interior the greater portion of the flooring, laths, deals, scantling, etc., as it is well known that large quantities of timber useful for these purposes are left to rot. It is also stated that the debris left by the loggers in the pine forests might be profitably distilled; but to bring about such necessary improvements and progress, the interior must have the benefit of better methods of communication with the markets than by the inefficient and tedious rafting system.

The rafts are formed on the ice before it begins to break up in order that advantage may be taken of the first rising of the waters. When this occurs the rafts usually arrive at Riga from eight to fifteen days thereafter.

During the period above mentioned from 1871 to 1882, there were exported from Riga 87,377,512 pieces of timber and lumber, or an average of 7,281,456 pieces per annum. The progress made in this trade since 1871 is shown by the fact that in that year only 4,542,155 pieces were exported; whereas, in 1882, 9,184,199 pieces were exported.

The total value, in silver, of the wood exported in that time was 122,342,708 roubles ($91,750,000); a yearly average of 10,195,225 roubles ($7,646,000). The value of the exports of 1882 was placed at 12,911,072 roubles ($9,683,000). A silver rouble is worth about 75 cents.

Of the leading articles exported during the twelve years, were in pieces, 3,651,095 staves and clapboards; 30,382,566 sleepers; 49,491,155 posts and flooring. With the exception of 47,769 pieces shipped to Africa, the whole amount was cleared for European ports. England received 58.7 per cent of the total exports; Holland 11.1; Germany 10.1; France 8.6; Belgium 5, and Portugal 2.2 per cent. The balance was taken by Denmark, Sweden, Norway, Spain and Italy. During the year 1882 the average charges, per St. Petersburg standard, to French ports were as follows: Dunkirk, Boulogne and Dieppo $9 to $9.50; to Havre, Honfleur and Rouen, $10.50@$11.50.

On the whole the timber and lumber trade of Riga, for the past several years, has made notable progress, and the movement in 1882 was especially favorable. The trade of France with this port, though not near so heavy as it is with Norway, yet it is of no mean importance as the transactions for 1882 reached the sum of about $835,000, and is susceptible of considerable expansion.

THE ADIRONDACK FORESTS.

The forest region popularly known as the Adirondack wilderness extends over a territory of nearly 2,500 square miles, including within its limits large areas of swamp, lake, and bare mountain tops. Nearly 1,000 square miles of this territory are probably already owned by the State of New York, which has gradually become possessed of the lands through the failure of former owners to pay taxes upon them.

It has long been the custom among owners of Adirondack forest property to cut off the forests as rapidly as a market could be found for the logs, and than abandon the worthless land to the State. It follows that the State lands are not in one or more large, compact bodies, but are widely scattered throughout the wilderness, and are not now covered with any considerable forest growth. The possessions of the State, therefore, great as they are in the aggregate, cannot at present greatly influence the water supply of the upper Hudson basin. In spite of the fires, however, which have swept over such portions of the wilderness as now belong to the State, destroying what little fertility the soil once possessed, forests will grow up again upon these lands in the natural course of events. Years, however, must elapse before these new forests, even if successfully protected from further damage by fire, can be expected to exert any considerable influence upon the water supply of the State.

The law which prohibits the sale of any portion of these lands is a step in the right direction. It is only a step however. In order to insure a permanent flow of water form the northern part of the State, the whole Adironack region must be preserved in perpetual forest. As long as bodies of timber, the property of private individuals, remain scattered among the State lands, it will be hopeless to undertake the preservation of the detached portions of the forest belonging to the state. Fire follows the axe of the lumberman, and nothing can prevent the spread of fire from private to public lands. If the private owners of the forest in the Adirondack region continue the lumbering operations now projected, the destruction of the entire wilderness is inevitable. The fires, which will find abundant material in the dry tops and branches of trees scattered by the lumbermen about their camps, will sweep year after year over the entire territory now occupied by the northern woods, gradually converting it into a barren desert, incapable of producing again even the most insignificant forests, until the growth and decay of generations of humble plants shall have returned to it some portion of its lost fertility. Nature heals such wounds made upon the earth's surface very slowly even in a climate of our own, and centuries, perhaps, will elapse before the forests of northern New York, once thoroughly destroyed by fire, can be made to flourish again. During such a transition period, possibly extending through centuries the Erie Canal will remain useless for the want of water; the upper Hudson will no longer be a navigable stream; towns and villages now rich and prosperous will be deserted; and the commerce of a mighty nation will be diverted from its natural channels.

If it is desirable to prevent such far-reaching calamities, no half-way measures should be adopted. If our water supply is to be maintained, the state must speedily acquire control of the whole Adirondack wilderness, and govern it in a manner to insure it against the danger of total destruction by fire. Nothing short of entire, absolute control can produce the desired results. The Erie Canal and the Hudson River cannot be placed beyond danger by any ill-considered measures or the makeshifts of mistaken economy.—*N. Y. Sun.*

GIGANTIC FAILURE.

MONTREAL, Nov. 21.—The news of the suspension of the oldest lumber firm in Canada, established over seventy-five years, struck financial circles here to-day as if a thunderbolt had fallen within their midst. No one could believe at first that the house of John Sharples, Son & Co., of Quebec, that had never in its long career been embarrassed, should be in financial trouble with half a million dollars liabilities. It was more than astounding, yet it was true. The cause of the sudden embarrassment arises out of the failure of the firm's agents in London and the downward turn of the English market for spruce deals, of which they have a quarter of a million dollars' worth awaiting sale in Liverpool and London. It appears that the English market has depreciated $6 per standard for the spruce, and if the house was compelled to sell the loss would be enormous, whilst by waiting some time the market is bound to return to its normal condition, and they would come out all right. The firm has shown the Merchants', the Union of Lower Canada, and the Quebec banks a statement with an estimated surplus of $90,000 of assets over liabilities, and asked for an extension, which was readily granted by all the banks interested to-day.

Mr. Charles Sharples retired in 1870, when the present firm was established, being composed of Mr. John Sharples, of Quebec, and Mr. George Oswald. Mr. Sharples died leaving a fortune of a quarter of a million of dollars, which was divided among his wife and family, and a large portion of which was invested in the present firm. The stock of the Union Bank, which is most largely interested, fell ten per cent. this afternoon. It is expected that more lumber firms in Quebec, New Brunswick, and Nova Scotia will have to succumb, as the English market is very depressed at present.—*Mail.*

LATER.

The Montreal correspondent of the *Mail*, writing under date Nov. 22nd, says:—Although commerce is dull here at present, yet business men and banks are cheerful, and take a sanguine view of matters coming out all right. It is true there is a shortage in the winter wheat crop, and that the lumber market abroad was against exporters, but these misfortunes must be borne. In an interview with a leading banker to-day, whose bank is interested in the failure of the old firm of Sharples, Son & Co., of Quebec, he assured me that a better or more satisfactory statement he had never seen presented to creditors in his career than had been furnished. At least 50 per cent. of the assets can be realized at once. The firm is only asking three months extension, and my informant hazarded the opinion I heard expressed by a leading merchant this morning that the extension would never have happened only to get rid of a partner in England whose social habits were such as to prevent their great business being looked after and pushed as vigorously as they required. One of the brothers has started already for Liverpool to take the management there. The liabilities are distributed among the following banks:—Union, $140,000; Nationale, $40,000; Quebec, $55,000; Merchants', $10,000. Added to this is the family claim, estimated at $110,000, which is not expected to be pressed. The firm's losses in England are reported to be very heavy.

SAVE THE FORESTS.

Our esteemed contemporary, the *Sun*, calls upon its associates of the press to come up and help save the forests of the country. We respond with pleasure. We welcome the light of the *Sun* on this point, and are willing to help get up a blaze on the subject. The importance of our forests cannot be overestimated. Their money value is enormous. The raw materials they yield—lumber, fuel, bark, etc.—are worth $800,000,000. No other single crop equals the forest crop in value. Two millions of working men are employed in harvesting this crop and working upon it. But the money value of the forests of the country, as shown by their annual products, is small when compared with their value as the great modifiers and equalizers of temperature and moisture. It is an unquestioned fact that, at the present rate of destruction, our great preserves of valuable timber will all pass out of existence within a few years unless some means are taken to moderate the consumption. It is equally true that the destruction of the forests is hastened by the waste of careless proprietors and by the failure of the Government to protect those still in its possession. There is not a great deal that can be done by law to preserve our forests, but there is something, and it should be done without delay, while we have left some forests to protect.

We have spoken of the duty on lumber that should be taken off at once. We ought to

encourage Canadian lumber to come in, instead of shutting it out. The Government, national or State, should preserve forests at the head of important streams like the Mississippi, the Hudson, Connecticut, Merrimac, Penobscot, Kennebec and Androscoggin, for instance, allowing the large lumber to be cut at stated periods, but leaving the smaller growth to cover ground and grow up. The forest lands in the possession of the Government, where such conditions do not exist, should be surveyed and sold at auction, because private proprietors will at least protect their property from waste. Where practicable, these timber lands might be sold with restrictions. The Timber Culture Act, which was an honest attempt to encourage the of forests on the naturally treeless plains, has yielded no fruit, and might as well be re pealed.

A wise measure would be the establishment of a Commission of Forestry, mude up of men who know something on the subject—of whom the number is so limited that selection would not be difficult—to consider the whole question and report what should be done. If at the head of such commission we could have such a man as Prof, Sargent of the Arnold Arboretum, assisted by the intelligent arboriculturist, Mr. Charles A. Dana, editor of the *Sun*, and others whose studies have been in this direction, we should be sure of a report of great valae, and so ably presented that even the average Congressman might be stirred to action for the preservation of our forests.—*Boston Herald*

READY MADE HOUSES.

The manufacture of ready-made houses is a business which has attained considerable prominence eastern and Canadian points. Few people unacquainted with the facts have an inteligent idea of this business, and the following concerning the Kennebec Framing Company, of Bangor, Maine, from a local journal, may be interesting.

Dwelling houses are made like boots and shoes—in any quantity or of any size or style, and for any market in the wide world. Not long since this firm received a shingle order for fifty houses for Cape May, to be delivered speedily and in complete finish, Those houses were not to be sheds, nor shanties, but regularly ordered dwellings, and they were made accordingly, and so delivered, and contain hundreds of occupants at this moment. An order will be received for a $50,000 hotel, or an ornate French roof cottage for a country estate,and these are as easily and expeditiously furnished as an ordinary boarding house for a country village or a barn for a ranch in Kansas or Colorado. It is not to be supposed that only a coarse, rough frame is thus sent out, to be trimmed into shape on the spot where it is delivered. On the contrary the house is complete when it leaves the factory, and as ready to go together as a musket when it leaves the armory in Springfield ; all the parts being found, even to the knobs for the doors, and the screens and shades for the doors and windows, according to specifications. Great trains of freight cars stand waiting about, and are freighted almost daily here. The refuse trimmings and edge cutting of the lumber are carted off to a neighboring pulp mill, and there speedily turned into material for paper, or other product. Machinery for almost every conceivable use in connection with wood is at hand, and house materials, of any kind, or size, or shape, seem to drop out like meal from a hopper. In a recent instance, where a large building was furnished for a southern order, the parts were thus made, and when put together in the city where the building is now standing, its length was found to vary not the eighth of an inch from the original specifications, although its length on the front numbered hundreds of feet. Every inch of this building, from the sill to last shingle, was sent ready prepared from the factory, and "set up," as readily and almost as quickly as a nail {cask.—*Wood-Worker*.

CARE OF SAWS.

Ewing D. Craddock, in a letter to the Cincinati *Artizan*, says:—The saw is one of the most essential and sensitive tools used. A saw to do the work required of it should be kept in a condition to do the work. First, the saw should be well balanced on the mandrel and hang true, presenting a straight face on the log side ; hang the saw plumb up and down ; second, keep your saw well pointed, so that every tooth will do the same amount of work that is required of it ; these are the first elements of a successful mechanic ; these, too should always be closely observed ; third, is the shape of the teeth, to which, as a rule, but little attention is paid by the majority of sawyers. Every man has his own ideas about putting his saw in order ; therefore, all cannot be right. My idea is this : A saw tooth should come in contact with the kerf that is to be removed at an angle of 45 degrees. This will produce a thin cutting edge, and will be found to produce the desired result, cutting with the least power, and to economize power is a matter of interest to all. It makes the lightest running saw. As to swaging the teeth, or spring them, I sometimes run one, then the other, but the spring tooth is, by far, the lightest running and cuts smoother lumber. The full swage, with plenty of power, will do as good work as any. The objections I have to the full swaged tooth is that it takes more power to drive it ; consequently there is more strain on the plate of your saw ; besides it cuts more kerf than the spring tooth, making your saw more liable to buckle. All sawyers know the wider the kerf the more power it takes to drive the saw, and the less feed can be carried ; but a spring-tooth will cut a quarter less than full swaged, and, as a matter of course, makes the lightest running saw. Still, each tooth cuts the same distance into the timber, and, therefore, I recommend the spring-tooth. I always spring the teeth at the extreme points, to prevent them from losing their set, for the nearer the point a tooth is set the longer it will retain its set ; and file the under sides of each tooth a little beveling, say 12 or 15 degrees, and the back straight, and you will find this kind of dress will give satisfaction in all kinds of timber. In this country, most all the sawyers run the chisel-tooth, or, as some call it the full swage, no set, and meet with good success, The reason of this is that a full swaged tooth is easier filed than a spring-tooth. Yet a spring-tooth does not require half the work to keep it up that a full swaged one does, and will make great saving in files and emery wheels.

The "Tribune" On Forestry Laws.

Speaking of the rapid destruction of forests, the New York *Tribune* says :—The usual practice appears to have been to cut down all the trees on a section, except the young shoots, and leave the bush and branches to dry, and most likely catch fire the next year. And thus what the axe may have left, the fire consumes, so that it really looks as though every precaution had been taken to destroy our forests as rapidly as possible. It is the custom of the Americans to speak rather patronizingly of the Canadians ; but in this matter they are wiser than we. There is a law in the Province of Quebec which forbids the cutting of pine trees unless they are 12 inches or over in diameter at at the butt, and the same timber dues are charged upon the small logs as upon the large ones, which has had the salutary effect of discouraging the cutting of small trees."

Our North-West Forest.

The Winnipeg *Times* of Nov. 17, says:—Mr. Robert Gunn, Crown Timber Inspector, has examined the Riding Mountain country, and says that it contains a plentiful supply of spruce, poplar and jack pine, which will be amply sufficient for the wants of Northwestern Manitoba for many years hence. He leaves on Monday to inspect the Duck Mountain country north of Birtle and Shoal Lake.

W. E. EDWARDS paid $37,000 at Ottawa for three timber limits, containing 100 square miles, situated near the headwaters of Lake Pdes Quinze, near the boundary line between the provinces of Ontario and Quebec, on the Upper Ottawa.

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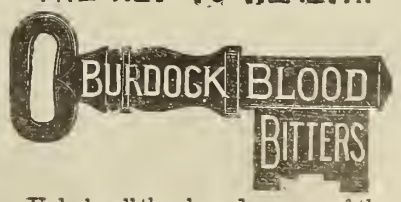

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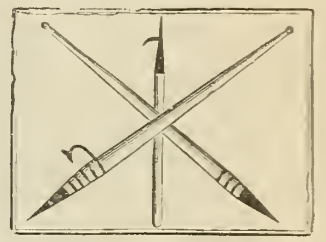

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FOREST PROTECTION.

The following article by our esteemed correspondent Mr. Edward Jack appears in the St. John, N. B., *Globe*, and we are happy to reproduce it:—

During the present autumn, when in the forests of the interior of New Brunswick, my attention was arrested by the brownish red color of the tops of the spruce trees on a ridge not very far distant from the hill on which I stood. To my astonishment I found that fire had penetrated these woods for a distance of from 12 to 15 miles, its average breadth being 2 miles, involving the loss of at least $50,000 to the owners in the way of stumpage, to say nothing of that to the country in the money which would have been spent in hauling, driving, sawing and shipping so many trees.

The fire in this instance had been the result of carelessness of two men employed as cooks on a river drive. They had set it in a bush pile on the shore of Burnt Hill stream and neglected to extinguish it,

During the time when logs are being driven fires are very apt to run even in hardwood lands, owing to the masses of dry leaves which at that time cover the surface of the ground; when once plants and low shrubs are in full leaf, there is very little to dread from forest fires until late in the season, after long droughts when every green thing is dried and parched up.

Forest fires are usually started by river drivers, hunters, fishermen, or free grant and labor act settlers, who have allowed to occupy what is usually called, among lumbermen "black land;" in other words covered chiefly by a soft-wood growth.

To meet these special cases there is no legislation, although it is urgently demanded. I propose to take up each of these cases separately, and show, in so far at least as the valuable Crown Lands of the Province are concerned, how the danger of destruction from forest fires can be reduced to a minimum by wise legislation and the adoption of cheap precautionary measures.

Before doing so and by way of preface I will quote the words of W. Little, Esq., of Montreal, a gentleman who has ever been foremost in the advancement of forest interests:—

"If the timber land owner would annually expend the same percentage he is willing to spend to insure other property of like value, towards putting his timber property in safe condition, he could so place it that it would be difficult to set it on fire so as to do any serious injury."

First mentioned and perhaps as important as any in the subject of forest fires caused by careless river drivers, a class largely composed of reckless and sometimes unprincipled men. Log drives are yearly becoming more consolidated, and the work which was formerly undertaken by half a dozen parties, is now frequently executed by one, since the greater quantity of lumber driven, the cheaper the work can be done, all other things being equal.

Such being the case one expects the party in charge of a large drive to see that proper care be bestowed on his neighbor's property, through which he is passing, and here legislation should interfere and require him to do something like the following manner:

He should be required to appoint one trusty man to see that no fire be left burning when the driving parties leave the spot where they have been encamped over night or when the men leave the spot where any may have been kindled for the purpose of lunch, dinner or any other meal; should the chief river driver fail to make such appointment of fire ward he should in such case be liable to a penalty and be made chargeable by law for any loss through forest fires which might occur by or through the neglect or carelessness of his men. Further, if any forest fire should happen by or through the neglect of the driving crew, that the party or parties guilty of such neglect or carelessness should forfeit his or their wages, provided damage be done to the surrounding forest to the extent of $10 or more, such party or parties being also subject to fine or imprisonment.

In order to compel the holder of the timber license to take an interest in this matter a clause should be inserted in the same, that in case the whole or part of any logs cut on such lease should be driven without the appointment of such fire ward by the man in charge of the drive, that all the blocks on which such logs may have been cut shall, or may be, declared vacant, and be again offered for sale at public auction.

The next class of people who sometimes are the cause of forest fires are hunters. As this business is uncertain and precarious, it would be as well for the interest of the individual, as well as for that of the country, to discountenance the professional hunter as much as possible, more especially as he frequently kills moose and cariboo for their hides alone, leaving the carcass in the woods to rot.

It has been suggested by Mr. Henry Braithwaite, and I entirely concur in the idea, that it would be well for the Government to make a large game reserve of the forests on the north side of the South West Miramichi, extending to the Tobique and Nepisiguit, and to place the same under the mangement of some competent woodsman, with competent assistants, whose duty it should be is to see that the game on these be protected. There are yet in this part of New Brunswick plenty of cariboo and many moose, and protection of game means protection of the forest.

In order to meet the exposes attending such reserve and its protection, hunting and fishing permits could be issued to parties giving bonds to hunt according to law, such parties to pay such reasonable sum as might be demanded. I have no doubt but that in a short time permits enough would be sold to more than pay all expenses, while the game would suffer no decrease, the production keeping the stock up.

QUEBEC PUBLIC FORESTS.

We take from the report in the Montreal *Herald* of the proceedings at the annual meeting of the Province of Quebec Forestry Association the following extract from the discussion on the President's report. It will be seen that the Quebec Commissioner of Crown Lands takes an intelligent interest in the subject:

Mr. J. X. Perrault referred to the great importance of education in the matter of forestry, and expressed the hope that the association would encourage the distribution of forestry literature throughout the Province. He would like to know, from the Minister of Crown Lands, if his department intended taking any steps to assure a proper distribution of forests in districts, so that the cutting of the forests should be done systematically, and that when one portion was cut the lumbermen should not return to that district for say twenty years, when it would be restored. This was the system followed in Europe and he thought steps should be taken to procure the same here.

THE COMMISSIONER OF CROWN LANDS,

Hon. Mr. Lynch, in reply, said that the progress that had been made in forestry matters since last year must prove a source of the greatest encouragement and satisfaction to the members of the society, and especially to the president, Hon, Mr. Joly, who had gone to much trouble. He did not think that persons generally realized the difficulties that attended the foundation of this society and the establishment of what was known as "Arbor Day." When the idea of having such a day was inaugurated he himself had thought there was very little in it, that it was more of an idea that would never become a reality. Practical experience had, however, shown him that it was a reality which could not fail to be the source of much future good to the country. There had been not a few difficulties attending the inauguration of such a day, but he was glad to be able to say, that from one end of the Province to the other a beginning had been made, and not only in the large cities and districts, but also in the smaller hamlets and villages, had the day been celebrated with much success, This, he was pleased to notice, was one of the results of that combined associated effort that had led to the foundation of this Association, and to the adoption of legislation regarding the protection and separation of our timber and colonization lands. He firmly believed that the latter was one of those pieces of legislation that would be of great good to the country. The object of the legislation in question was in the direction to which Mr. Perrault had referred. He had only occupied, he might say, the position of Minister of Crown Lands for a few months, but in this short period he had learnt that it was a most responsible position and that upon it depended very greatly the future prosperity of this province. He thought that they should protect their natural resources; about all that they had now was their forests, and they were a legacy handed down to us to preserve, not to destroy. He might add that there was no legislation of the nature spoken of by Mr. Perrault, and he did not know that he was in a position to bring such legislation before the approaching session of the legislature for the reason that it covered the whole ground and had to be most carefully considered. The aim of the Association, he thought, should be to encourage whatever Government was in power to preserve and protect their forests, and he was in hopes that before long the Association would depute one of its members to co-operate with the Minister of Crown Lands, and in this way such legislation might be effected as would assure the object spoken of by Mr. Perrault. He referred to the great need there was for education on this subject, as there existed, to a great extent, in the minds of the masses, an idea that this movement was one of no practical effect, and this idea would have to be dispelled. It had been said that a conflict might arise between the Government and the lumbermen. He, however, believed that the great majority of the lumbermen would aid them, as it was to their interest to do so. The importance of the subject was great—so great, in fact, that when the meeting adjourned it would do so with the understanding that the members should meet again at an early date to discuss the question. Legislation was imperatively needed. He would like to see it well and carefully considered, but he would also wish to see it passed as speedily as possible. The future prosperity of the Province depended largely, he was convinced, upon the action they took now, and there should be no delay in the matter. (Applause.)

Mr. J. Y. Perrault suggested that a committee be appointed to take the matter of legislation into consideration and report to the Association.

THE FORESTRY EXHIBITION.

We referred a few days ago to the International Forestry Exhibition proposed to be held next year in Edinburgh, The forest productions of Canada are such as to enable her to take a very high place, if not the highest, in some of the departments embraced within the scope of the Exhibition. In this connection it may be interesting to refer to the report of the Royal Commissioners upon the exhibit made by Canada at the International Exhibition held in London in 1862. The Commissioners say that "in point of size of specimens, excellent selection and information given, the Upper Canada collection of models is undoubtedly the finest in the exhibition building. It is contributed by sixteen individuals, and consists of planks, logs, squared logs, transverse sections, polished specimens, veneers, and a very extensive series of scientifically collected and named leaves, flowers, shoots etc., etc," This collection the Royal Commissioners refer to in very high terms of praise, such as "magnificent," "beautiful," "noble specimens." Some of the wood specimens were five feet in diameter. One of white oak which reached London too late for exhibition, was six feet in diameter and six feet long, from a tree with a trunk sixty to the first limb. There were planks of extraordinary dimensions one of white pine and one of white oak, each fifty inches broad; black walnut thirty inches; hickory, thirty-six inches; and a beautiful plank of soft maple twelve feet long by forty-five inches broad. Of the scientific collection the Commissioners speak in equally high terms of praise. Amongst the exhibitors was the Hon. James Skead, of this city, who sent five specimens of timber from the Ottawa region. Samples of these were given to the leading Governments of Europe, to the scientific societies, to the Admiralty, to the British Museum, to Kew Gardens, to Lloyds, and Lloyds added several kinds of Canadian woods to their A No. 1 ships. The Kew Gardens' authorities erected a building expressly for the woods from the exhibition, giving the Canadian woods the place of honour. The Royal Commissioners state that the Canadian collection derived much of its exactness and scientific value to the exertions of the commissioner, Dr. Hurlbert, and they refer to the collection generally as one of the most complete illustrations of the resources of a colony ever exhibited. It is of the utmost importance that Canada's forest products should be properly represented at the Edinburgh Exhibition. There is not too much time at disposal for making the necessary arrangements and for urging those interested to go to work to prepare their specimens. If the Government decide that the country shall be represented on the occasion, and no doubt they will so decide, we feel sure that Parliament will cheerfully vote the necessary sum of money to pay the expenses of the exhibition. There never was a time in the history of our country when so much attention was paid to Canada and her resources as the present. The Dominion is being advertized in the United Kingdom and in Europe as it was never advertized before. The visits of prominent Englishmen; the favourable reports of agricultural delegates and of men of such high standing as Professor Tanner, which we have noticed recently; the varied services of our late Governor-General; the exertions of the Canadian Pacific Railway Company; and the Canadian display at the International Fisheries exhibition, all have had the effect of bringing Canada and Canadian affairs before the British public. The approaching Forestry Exhibition will afford another favourable opportunity for making the country still better known. Whatever is to be done for having the Dominion represented on the occasion should be done without delay.—*Ottawa Citizen.*

FORESTRY IN ENGLAND.

We take the following from the London *Forestry*:—

On Thursday, the 2nd of August, Sir John Lubbock found the opportunity he has for some time been seeking of calling attention, in the House of Commons, to the important question of establishing a forest school in England. He did so when the House went into Committee of Supply and the vote of £23,232 for the office of woods and forests came on for discussion. Sir John asked the Government to consider during the autumn the question of forest education in this country, and whether the natural forests might be utilized for this purpose. He said

"So much, indeed, had forestry been neglected, that in Scotland the words suggested deer, but no trees; while the idea of foresters in England was associated with the members of an excellent provident institution. Of course, the Crown forests formed but a small part of the subject. There were altogether, in round numbers, 2,500,000 acres of woods and plantations in this country, so that the subject was one of vast importance. Moreover, it was calculated that in Scotland and Wales they were 5,000,000 or 6,000,000 acres at present almost valueless, and which, if judiciously planted, would give large results. In the science of forestry we were, he feared, far behind, most foreign countries, especially France and Germany: and he was very anxious that our landed proprietors should benefit by the experience which other nations had acquired. But let him ask where was a country gentleman who owned woodlands to obtain information as to their management or to procure trained assistants? We had no forest school in this country: we had no class of persons specially trained and instructed in the formation and management of woods. It was, he feared, still true that, as the House of Commons' Committee of 1854 reported, timber is "everywhere worse managed than any other species of property." Unless something were done this state of things would continue. On the other hand, the highest authorities had expressed a very strong opinion that we might make our woodlands much more profitable: they show one step which was a necessary preliminary. The highest English authorities were strongly in favor of the establishment of a forest school, and had forcibly pointed out the loss which our present system of management, or rather mismanagement, entailed on landowners. Mr. Brown, in his standard work on forests, observed that "if our forests had been judic-

iously managed we should not find so great a part of the woodlands of Great Britain in the unprofitable state in which they are."

"We were the only important nation in Europe," argued Sir John Lubbock, "without a forest school, and yet, if we included our colonies, our forests were the largest and most valuable in the world. It appeared to be a very strong argument in favor of the establishment of a forest school in this country that at present the young men who were going out to manage our Indian forests had to be sent for instructions to the great French school at Nancy. No doubt that was a most excellent institution and we were indebted to the French Government for the courtesy with which they had received our English students; but the system of education given there naturally contained some branches, as, for instance, the study of French law, that were not adapted to English students. while there were many other considerations, such as climate, which rendered a Continental school less suitable for English requirements. He might add," he said, "that no young Englishmen, as a matter of fact, went there excepting those intended for the Indian service. For our colonies, again, the establishment of a good forest school would be of very great importance. A judicious management of their woods would add considerably to their income. French foresters had recently been sent to the Cape of Good Hope and Cyprus, it having been found impossible to obtain any countrymen of our own with the necessary knowledge. Perhaps, however, he should be asked why the establishment of such a forest school, if it were so urgently needed, should not be left to private enterprise. The reason was clear. A properly equipped forest school must have attached to it a large extent of forest in various stages, and having a variety of climates and soils. This, it was obvious, no private institution could supply. He did not, however, say that this would neccssarily involve the establishment of a Government school. He understood that the Government contemplated an arrangement with the Cooper's Hill College, but he trusted that before instituting a Government school they would inquire whether such colleges as Cirencester could be made available for the purpose, and possibly some arrangements might be devised by which, under careful regulations, the professors and students attached might periodically visit our national forests. He might mention, in illustration, that lately the Cape of Good Hope Government determined to appoint a Forest Commissioner, with an income of £800 a year. Thye could not, however find any qualified Englishman, and were obliged to appoint a French gentleman, even though he could not speak English. The Society of Arts had memorialised Her Majesty's Government on the subject, and the presence in this country of Dr. Brandis and Colonel Pearson rendered the moment one of which it was desirable to take advantage. He hoped, therefore, Her Majesty's Government would not think him unreasonable if he asked them to consider this important question."

TREE PLANTING.

A meeting, fairly attended by both ladies and gentlemen, was held last evening in the school room of St. George's Church, Carleton. The Rev. Mr. Dowling presided, and Mr. A. Rankine Bedell acted as secretary. Mr. Dowling, in an appropriate speech, put forward the object of the meeting which was to make arrangements for planting trees around the church grounds. He mentioned several matters of historic interest current with the affairs of the church. There are thirty-nine trees to be planted and thirty-six of them are already provided. Formal resolutions passed approving of the proposed memorial tree planting in the church grounds, providing that it should take place on Friday afternoon, weather permitting, at 2 o'clock, the committees and tree planters to meet at the school room at 1.30 p. m., to complete the final arrangements, and also providing for an appointment of a committee of five to arrange all details. The committee appointed were the churchwardens, and Messrs. Mosher, Cowie and Sewell. A vote of thanks passed to the rector and wardens of the Church for the use of the room and for their services in connection with the proceedings. It was decided that if Friday's weather is not favorable the tree planting shall take place on the first fine day afterwards. A very hearty feeling prevailed at the meeting. Trees are to be planted to the first bishop of New Brunswick, to the first rector, and the various rectors of the church, etc., but the list was not complete last evening.

The tree planting which was to be done on King Square on Nov, 26th, Evacuation Day, under the direction of the New Brunswick Historical Society, has been postponed until the 18th of May next. Two trees will be planted on the 26th—one to George III, and one to Queen Victoria.—*St. John, N. B., Globe.*

Arrivals in London.

The *Timber Trades Journal* of Nov. 3rd, says:—The arrivals this week to London are very heavy, evidently stimulated by the cheap freights we have commented on lately. Forty-six steamers and twenty-nine sailing ships with wood cargoes in the Thames the last week in October is something unusual in the annals of the timber trade. It all points to the immense difference steam has made in the carrying trade. Formerly the opportunity of chartering at a low rate, so near the close of the shipping season, would have been very rare, and the chance of getting the stuff home very doubtful, yet probably all the steam cargoes reported have been secured within the past few weeks, Of this week's London list Sweden contributes 25 cargoes, Russia comes next with 24, Canada 9, Norway 5, Germany 4, and other countries 8. Flooring cargoes are limited to two; of deals, &c., there are thirty-nine cargoes, 11 of firewood, and seven of lathwood, sleepers, mahogany, &c., completing the list. There is not a complete cargo of square timber among the arrivals.

THE timber is being dressed and foundation partly laid of the new Rainy Lake Lumber Co.'s mill at Rat Portage.

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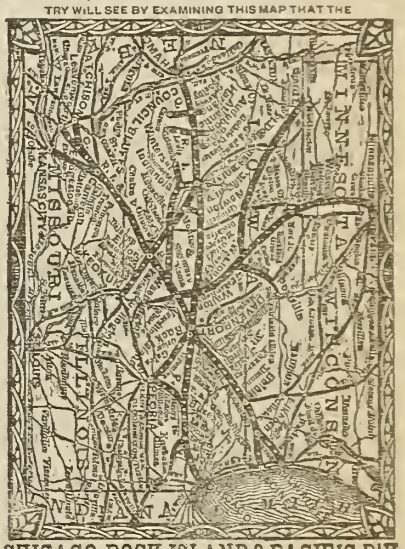

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CHICAGO.

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., DEC. 1, 1883.

ANNOUNCEMENT.

WE have for the last few days been sending out subscription and other accounts. There is a very large sum on our books in these small amounts, which, though of trifling importance, taken singly, make altogether a very considerable aggregate. We would therefore invite those who are in our debt for these small sums, which they can pay individually without inconvenience, to remit the amonnt to us promptly, and thus collectively give us the benefit of a very satisfactory account at our bankers'.

It may be seen how large the total of these comparatively insignificant amounts must be, from the fact that we have sent out about 1,500 of these amounts during the last fortnight.

Another reason why we desire a prompt settlement, is that in pursuance of the arrangement by which our business is to be conducted after the end of this year by the Peterborough Review Printing and Publishing Company (Limited), it is necessary that the books of our firm should be closed as soon as possible.

We feel confident that under these circumstances our request will meet with ready and speedy compliance.

TOKER & CO.

THERE is said to be a machine in Glenn Falls, N. Y,, which successfully makes pulp for paper out of sawdust.

CHARLES BARTLETT, of Hanover, and Mr. J. R. Hall, of Andover. Me., will put 2,000 cords of poplar into the east branch of Ellis river this winter.

THE Kingston *Whig* says:—The raft caught in the Rideau Canal ice is W. McRossie's and the timber is needed to fill his penitentiary contract. He will be a heavy loser and fervently pray for a thaw.

A LARGE timber-laden vessel has been lost on the Cape Breton coast, but no trace of the crew can be obtained, nor can the ships name or dimensions be made out.

JOHN H, MONTEITH of New York city, recently cut up a log of Mexican mahogany, which made 25,000 feet of veneers, and two other logs averaged the same.

THE superintendant of a large planing mill at New Haven, Conn., writes us that they have more orders for planed yellow pine lumber than they can fill in six months.—*The Wood-Worker.*

MCDONALD & SHIELDS' new mill at Vermillion Bay has been closed down for the season. Gangs of men will be put into the woods, and about six million feet of lumber will be taken out this winter.

CHAS. E. FRANCIS, of Cincinati, O., writes that his gravity cross-cut saw is becoming very popular. He lately sent one to a Minnesota firm, and received an order for two more from the same parties last week.

THE Napanee *Beaver* has this item from Queensborough:—The Rathbun Co. have now some four shanties located on the waters of Black Creek. The Gilmour Co. have stopped business in this district. It makes things dull.

THE *Wood-Worker* says:—For years past millions of feet of oak staves have been cut in Arkansas and shipped to Europe by way of New Orleans. The French and Germans think that in all the world there is nothing equal to Arkansas oak for making wine casks. It is stated that all other wine making nations use the same wood.

A Washington dospatch says that the attention of the Government has been invited to the International Forestry Exhibition to be held at Edinburgh in the summer of 1884. The exhibition will be open to contributors from all countries and is designod to include everything connected with or illustrative of the forest products of the world.

THE Indiana Lumber Co., whose saw and planing mill at Nashville, Tenn., was totally destroyed by fire last month, has taken steps toward the immediate eroction of an extensive mill. The new saw mill will contain both circular and band saws. It is proposed to make the new establishment one of the most complete in that vicinity.

TEXAS, Arkansas and Louisiana are said to contain 190,000,000,000 feet of standing pine. If this is so, a timber famine is not probable in this generation at least, when we remember that soveral other southern states are well timbered. In comparison with these states the stock of timber in Michigan, Wisconsin and Minnesota, the three great lumber producing states sink into something approaching insignificance.

ENGINEERS at Mayence have met with remains of the bridge erected over the Rhine at that point by Charlemagne near the close of the eighth century. It rested on 28 buttresses, and was destroyed by lightning, burning down to the level of the water. The engineers have removed over 50 piles of from 15 to 18 feet in length, and the timbers are well preserved, though nearly 1,100 years old. In fact, the timber is still fit for use in building. The same is true of the iron which was rivited to the posts.

TWO St. John gentlemen, Capt. Calhoun and Mr. Wm. Hanson, have purchased a tract of timber land in the vicinity of Spruce Lake, St. John county, New Brunswick. They intond to set up a steam saw mill on the lot between the outlet of Ludgate and Spruce Lakes, and cut dimension timber for the American market. There is, says the St. Croix *Courier*, an abundance of spruce and cedar on the properpty surrounding these lakes, and good facilities are afforded by the Grand Southern Railway for getting it to market.

THOUGH considerable yellow pine is shipped from South Mississippi to Boston and other eastern ports, yet the largest part goes direct to foreign ports, Europe, England, Africa, Central and South America and Mexico.

THE *Timber Trades Journal* says:—The shipments of spruce at St. John, N. B., seem to be dwindling away. Sellers are of opinion that it would be a sound speculation to buy what remains there at the present market price. They believe the time is not remote when there will be an active demand for these goods. Nor is that opinion singular. It is whispered in other quarters that the price of spruce must go up and that soon.

A SUPERINTENDENT writes:—"The best workmen I have ever known are those who give a little attention to their machinery after stopping time, just as a good groom takes the best care of his horse when it is the hardest worked, seeing that it is cared for before he gets his own supper. The result in the one case is that the horse is always fresh and ready for hard work, while the machine is always turning off a good quantity and a good quality of work."

THE Laminate Wood Company of Chicago, is about to introduce some specialties that are of interest to dealers in that line. They will consist of the French scoop for grocers, druggists, and millers; the Chapman elevator bucket, for flour and grain; and the Caldwoll pulley, for all mechanical purposes. These goods are made of layers of veneers peculiarly built up according to several patents lately issued, so as to make light, strong, cheap and durable goods,

A PROPOS of the recent cotton failures, the *Timber Trades Journal* says:—Though there is no great affinity between the cotton and the timber trades, we do not hear unconcernedly of large failures in the former, because in point of fact important suspensions in any trade unfavorably affect every other, as they tend to destroy commercial credit and render the necessary accommodation which trade requires more difficult to obtain, and have a generally depressing influence.

GRAVENHURST.

From Our Own Correspondent.

Nov. 24.—The weather set in very severe here about two weeks ago, accompanied by a a heavy fall of snow, in consequence of which the saw mills have all shut down. The weather has, however, moderated since and the snow has all disappeared. The following is a list of the saw mills in Gravenhurst and the immediate neighborhood, and the quantity of lumber and shingles cut by each during the season just closed:—

Name.	*Lumber.*	*Shingles.*
G. W. Taylor & Co	5,000,000	
Chas. Mickle	5,000,000	2,500,000
Woodstock Lumber Co	5,000,000	
H. DeBlaquic	1,500,000	9,000,000
J. Cockburn	5,000,000	3,500,000
Thompson & Baker	3,000,000	
Crone & Patton	2,000,000	3,000,000
J. Davidson	1,000,000	
Tasker	2,500,000	1,000,000
T. H. Carr & Co	2,000,000	
J. H. Hull	1,000,000	7,000,000
Hazzard		1,500,000
T. Tait		4,000,000
King		1,000,000
P. Bartholomew		7,000,000
Eatle		3,000,000
Sundry small mills		2,500,000
Total	33,000,000	45,000,000

Besides the above there are a number of small mills up the lakes which send their lumber to this point in scows to be shipped hence by rail. The amount cut by these mills will be about 4,000,000 feet of lumber and 15,000,000 shingles, making the total amount shipped, or to be shipped, from this point 37,000,000 feet of lumber and 60,000,000 shingles. Of the above amounts nearly all the shingles have been shipped, and about one-fourth of the lumber, leaving about 27,000,000 feet of lumber to be shipped. Should this move off very slowly during the winter (as there seems every prospect of) there will be a great rush to ship in the spring, and a repetition of the old cry "no cars," the rolling stock of the Northern & North Western Railway being totally inadequate to meet the extra demands made upon it at that season of the year. Looking back, the past season may be said to have been rather an unfavorable one for mill men. In the first place owing to the severity of the winter and the high rate of wages then prevailing, stocks cut at $1 per M more than on any previous season. Wages have also continued high during the past summer, thus adding materially to the cost of manufacture, while those mill men who have sold their stocks *en bloc* have had to accept prices ranging from $1 to $2 per M less than last season. Over production seems to have been the main cause of this, and it will be well for the lumbermen, if, taking a lesson from the past, they confine their operations during the coming winter, and each one take out one-half, or even less, of what they have been accustomed to take out, for, unless the production is largely curtailed, the prospects are that prices will rule even lower next year. The pine in this section of the country is generally of poor quality only a small percentage of it being suitable for the American market, thus throwing the great bulk of it on our local markets, and as our markets are naturally limited over production immediately makes itself felt by causing a glut, and down come prices. There is, however, a class of lumber the demand for which always seems to exceed the supply; I refer to bill stuff, and it seems to me that mill men would be wise in turning their attention more to the manufacture of this kind of stuff, as they can always command a ready sale for it at good prices, with the advantage that it can be immediately turned into cash, without having to carry it for eight or ten months after it is manufactured as has generally to be done under the present system.

WHITE CEDAR BARK.

To the Editor of the Canada Lumberman.

SIR,—We have a little industry here, just started—that of making paper from the bark of conebearing trees—principally the white cedar bark. Can you give me, or put me in the way of getting, any statistics as to the amount of cedar sawed in the different States and in Canada? As we rely on the bark that is a waste at the mill, incidental to the sawing or getting out of the cedar lumber, we might get some idea of the amount of bark if we knew the amount of wood used or manufactured. Our process is patented in Canada, and we are showing a very fair business here, with bark brought from Maine by vessels. A mill in Canada ought to do very well.

Yours truly,

JOHN M. ALLEN.

343 Purchase street, New Bedford, Mass.

OUR WOODS AND FORESTS.

Now that by gracious permission of the Toronto *Globe* the subject of forestry is open for discussion, we beg to call attention to one important branch of this question, not, however, for the first time. In spite of the great inroads that have been made upon the forests of Ontario, and, in spite of the large expanse of woodland that has been alienated from the Crown, there still remains a vast extent of land more or less valuable for its timber. In fact this class of property is a very large asset in the capital of the Province.

It cannot be said that this public property has been well managed in the past, or that it is being well managed now. It is not a party question, for with the exception of the point of treating the proceeds of sales as income instead of capital, the same want of good management has existed under both political parties. The property has not been utilized to the best advantage or to the greatest profit posssible.

It seems to us, as we have already suggested, that there should be, if not a separate department, at least a distinct sub-department or bureau of Woods and Forests for Ontario. One of its first duties should be to subdivide, in consultation with the Crown Lands Department officials, the public domain yet remaining unappropriated. After the necessary surveys and examinations are made the Crown Lands should be divided into areas open for agricultural settlements and areas to be reserved for forest. Of course this division need not be

permanent in its details, for it may hereafter be found advisable to open forest land for agricultural purposes, or to withdraw additional areas from settlement to extend the forest. But from time to time the limits should be fixed and should not be encroached upon irregularly.

This system would offer several advantages of importance.

1. It would open the way for the scientific cultivation of our public forests and for their permanent preservation, a policy that should be at once adopted.

2. It would facilitate the treatment of these public forests as real estate expected to produce an annual crop—as capital from which a yearly income should be derived—and not as a source from which might be derived casual receipts to be treated as revenue, even though the property is alienated.

3. It would diminish the risk of fires spreading through our present forests or those to be planted—a risk against which it is very hard to guard under the ordinary method of clearing land—so long as agricultural settlements are interspersed with forest.

4. It would put an end to much of the divergence of interests, the disputes and contentions between settlers on wooded land and holders of timber limits and licenses. The lumberman need not intrude on the settler's lands or the settler upon the lumberman's limits.

5. It would prevent settlers from being tempted to clear and expend their energies, time and money upon land that is poorly fitted for agriculture, and that would be far more economically and profitably devoted to the production of timber.

Without the adoption of some such system Ontario will soon experience the financial disadvantage of having a large portion of its capital, its forests, vanish for ever, to the impoverishment of the country, with nothing to show for the receipts that had been used to meet current expenditure. It will also experience the economic disadvantage of no longer having any timber to export or even for its own use, but will on the contrary have to import from abroad.

It is urgently necessary that our remaining forest should be reserved and in part renewed before it is too late, and we would invite thoughtful consideration of the policy we have outlined. —*Peterborough Review.*

WASHINGTON TIMBER.

The Seattle, W. T., *Post Intelligencer* thus describes the timber of a locality in Washington Territory: "A man from Illinois, who recently visited the Quileute country with a party of land seekers, returned a day or two ago, and called to tell us what he found there desirable to seekers of government land. A number of little prairies were seen that for beauty and fertility cannot be excelled, while the bottom land is as rich as the best anywhere. Game and fish are also very abundant, so that a settler of very ordinary ability as a sportsman need not trouble about meats for his table. The timber, though, is the crowning glory of that country. It consists of fine maple, cedar, alder, fir, and spruce—principally the two latter varieties. Our informant saw great tracts of spruce that average four and a half feet in diameter, with trees here and there nine and 10 feet through. Trees rise 250 and 200 feet above the ground. Altogether, it is the best timber country he ever saw or heard of, the only disadvantage to it, or depreciation of its value, being the absence of saw mills and local demand and the lack of an outlet to the trade abroad. A continuance of immigration there, however, will greatly change matters and appearances during the next two years.

NORTH OF LAKE SUPERIOR.

A reporter of the Ottawa *Citizen* has had an interview with Mr. H. J. Hubertus, an old journalist, who has been taking a trip on the C. P. R., north of Lake Superior. From the published account we take the following extracts:—

"Did you learn anything as to the extent of the timber district remaining?"

"No. Nothing definite. Still it must be enormous, as the headwaters of the streams emptying into the Ottawa and Lakes Nipissing and Huron are not yet encroached on. Mr. Klock is making a raft of square timber near Veuve Station, and Mr. James Worthington is making two rafts of square timber at Sudbury Junction, for shipment by rail."

* * *

"Where do the Construction Company get their timber?"

"They have erected two portable steam mills west of the Sturgeon and saw the boards and dimension timber required. They own oak and other timber lands near there, and it is thought will also erect car works at Sturgeon Falls, where there is good water power."

* * *

"The country is all under timber license along the line of railway, I believe?"

"Yes, along the stream emptying into Nipissing and French rivers. Worthington has the license of McKim township at Sudbury Junction. The licenses do not extend very far back, however."

"Will not this interfere with settlement?"

"I think not; rather otherwise. The timber will be cut, and the settler will work for the lumberman in the winter and on his own land in the summer, and all his farm produce will be immensely valuable."

CHOICE LUMBER.

One of the choicest lots of lumber that has been brought to the Chicago market for many a month, and we might reasonably say year was seen upon the docks of Messrs. Cutler, White & Boice. It had just been received from the mills of White, Friant & Co., Grand Haven, Michigan, and comprises upwards of a million feet which is running 75 per cent. better than common, Chicago yard grading. Fully 40 per cent. of it is thick uppers, and 45 per cent is grading better than C. The lumber bears the "diamond o" brand adopted by the manufacturers and was sawed from Grand river stock, which, according to the timber statistic sharps, should be entirely played out. The rule was laid across any number of pieces of three-inch plank, from 24 to 28 inches wide, clear as a quill and handsome as a piece of rough lumber could well be. The lot contains a very desirable 1¼-inch stuff that is especially sought after in this market and altogether it ought to prove a veritable bonanza to its holders. They may be confidently assured of one thing, which is, that every inch of it will not only be wanted, but eagerly sought after before the saws that made it get half their next season's revolutions made. The yard of Messrs. Cutler, White & Boice presents altogether one of the finest and best selected stocks of lumber we have ever seen in pile. The amount now in hand is about 9,000,000 feet, and so well arranged that an order for anything that enters into the construction of a building can be filled to the last stick without going off the premises for any of it.

Forests Laid Flat.

BANGOR, Me., Nov. 15.—The first reports of the damage by the gale gave but a slight idea of the havoc wrought. The calamity appears to be of great magnitude. The greatest damage appears to have been within a belt some miles wide crossing Piscatigins county and northern Penobscot into Aroostook. Great stretches of forest were levelled to the ground and millions upon millions of valuable timber destroyed. Whole townships in some instances are said to be nearly flat. The loss is certainly several hundred thousand and one well known lumberman estimates the total damage throughout the state at a round million.

THE Cardiff correspondent of the *Timber Trades Journal* of Nov. 3, says:—This week we have again had a large number of arrivals with Canadian goods. A good many of the deal vessels, both from the Baltic and Canada, have had to wait four to six days in the roads before they could be admitted into dock, as our docks are so crammed, that it is even difficult for vessels to move in them. Of course this is very detrimental to the trade, and shipowners demand higher rates of freight than otherwise would be the case. Business is good; all our importers are very busy, both in receiving and delivering, and the prospects appear to be very satisfactory.

THE Madoc *Review* says:—Mr. Blount informs us that Gilmour & Co.'s suspension of the past few weeks was only temporary, and they are again going on with work both at headquarters and in the woods. Large gangs have gone to the shantics during the past day or two, many men having never come out when work stopped, expecting to go to work again shortly. The firm's operations this year will be quite as large as usual. This will be very gratifying news. We regret, however, losing Mr. Blount and the company's office from Madoc, both of which will be severely felt.

E. S. VINDIN,
Commission, Shipping, Forwarding and General Agent.
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GENERAL ENGRAVERS.
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WHITE PINE BLOCKS WANTED
For MATCH SPLINTS, 4 and 5 in. long by not less than 3 in. by 1 in., free from sap or knots; or plank for same. Quote price f. o. b. to
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A. & T. J. DARLING & Co.
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Specialties—"Darling" Axes, Saws, Cutlery, "Black Diamond" Files.
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SPALT MACHINE
For saving Lumber refuse, second hand, but all complete and in good order, taken out to replace one of greater capacity.
Address,—
THE RATHBUN COMPANY,
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$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfits and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine.

ST. LAWRENCE CANALS.

Notice to Contractors.

THE LETTING of the work at the upper entrance of the CORNWALL CANAL, and those at the upper entrance of the RAPIDE PLAT CANAL, advertised to take place on the 15th day of NOVEMBER next, are unavoidably postponed to the following dates:—

Tenders will be received until TUESDAY, the FOURTH day of December next.

Plans, specifications, &c., will be ready for examination at the places previously mentioned on and after TUESDAY, the TWENTIETH day of NOVEMBER.

For the works at the head of the Galops Canal, tenders will be received until TUESDAY, the EIGHTEENTH day of DECEMBER. Plans and specifications, &c., can be seen at the places before mentioned on and after TUESDAY, the FOURTH day of DECEMBER.

By order,
A. P. BRADLEY,
Secretary.

Department of Railways and Canals,
Ottawa, 20th October, 1883. d103

FOR SALE.
A LATH TRIMMER,
NEW, and in good order, will be sold Cheap. Address,
THE RATHBUN COMPANY,
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SHINGLE MILL MACHINERY.
Parties requiring New Machinery for Shingle Mills, will do well to communicate with us before purchasing.
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WATER POWER
TO LEASE.
THE UNDERSIGNED having largely extended their raceway at Lakefield, are desirous of corresponding with parties who wish to go into manufacturing, and they are prepared to sell or lease water power on the most favorable terms, or would erect buildings of any size suitable for factories.
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SAW MILL MACHINERY FOR SALE.
STEEL AND IRON
Slabbing and Stock Gang Gates
WITH OSCILLATING MOTION, ALSO,—
IRON PITMANS, FLY WHEELS, Driving Pulleys, and other Saw Mill Machinery,
In Good Order, which has been taken out of Mills that have been closed. Address,
The RATHBUN COMPANY,
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MACHINERY,
ENGINE, BOILER,
ROTARY MILL, &c.,
IN THE
St. Martins Manufacturing Co's Factory and Saw Mill at St. Martins,
CONTAINING
A Waterous 80 H.P. Engine and Boilers, Rotary Saw Mill,
Saw Tables, Planers, Shafting, Hangers, Pulleys, Belting, Lathes, Pumps, etc.
One Fleming & Sons' 50 H.P. Engine and Boiler,
Waterous Saw Mill, Daniel Planer, Band Saw, Planer and Matcher, Saw Tables, Shafting, Belting, etc.
If not sold *en bloc* by the 10th of October, will be sold in lots to suit purchasers.
Catalogues giving particulars of the Machinery, etc., can be had from the liquidators, or at the offices of W. H. OLIVE, No. 167 Prince William Street; T. McAVITY & SONS, 13 King Street, St. John; and W. E. SKILLEN, St. Martins. 4L21

FORESTS OF ONTARIO.

We continue our extracts from Mr. R. W. Phipp's report:

THE POSITION IN WHICH FORESTS WOULD BEST EFFECT THE ONTARIO CLIMATE.

To produce their best effect on climate, three points are to be observed, 1st. To occupy the heights, firstly that they are generally of poor land well spared for that purpose; secondly, that wooded elevations preserve rain, feed springs, and continue water-courses in regular action. 2nd. They should be of considerable depth as well as length, as a thin line of forest will not by any means preserve the moist and humid atmosphere within their bounds on which their beneficial action depends. For such purposes, they should not, if it could be avoided, be less than a mile in depth from front to rear, and they had better be ten or twenty. To act as reservoirs of humidity they must be of fair extent, otherwise they will neither be able to feed the water-courses, nor to send upwards to the clouds those moist currents which, it appears by all experiment, meeting with a differently constituted atmosphere of the air, produce rain at those seasons when it is most needed. 3rd. If possible, such forests should stretch across Ontario in lines from northwest to southeast.. They would then be in position profitably to intercept the southwest wind, which is the great bearer of moisture hither from the Gulf of Mexico and the tropical seas. For instance, as has been observed, the great forest northeast of Ontario does not bring much rain relatively to Ontario. Most of the rain a forest obtains will fall northeast of that forest. The exceptions are when an east or northeast wind, meeting the southwest current, produces rain, and is sufficiently strong to carry before it the rain bringing current; but this is not to be depended on, the intention in endeavoring to preserve the forest in the line mentioned, being that the ascending currents shall meet and produce rain from the moisture-bearing winds, which are mostly southwest in reality, though often deflected and turned away by local or other influences. Of course it is not expected that Ontario can be mapped out in field and forest at this late day. But we can know in what direction to strive here, and where forest overspreads the whole country, as in part of our territory elsewhere, very much indeed can be done.

It must always, however, be remembered that east, and even northeast winds, can and do bring rain of their own force from the Atlantic direction. But the southwest wind is the chief rain bringer. The others may be called with reference to Ontario, local. The southwest wind brings moisture to the whole northern hemisphere.

TREES BY THE ROADSIDE.

Premiums have been very properly offered here, in a Bill just passed through Parliament, to those farmers who shall plant and maintain in growth certain descriptions of trees. The Bill refers principally to lines of trees set along the highway and the dividing lines of farms. These, or small plantations of any sort, are valuable, but by no means fulfil the functions of deep belts of forest. Their great value is, if planted over sufficient sections of country, that they preserve the land from drying winds, and in that way, if they do not, as the forest does, bring rain, they preserve the effects of rain for a much longer period. Secondly, and a very important benefit indeed, they prevent the wind from drifting the snow off the fields they inclose, and the roads bordering them. Left evenly on the ground, the snow is a vast benefit to the soil and the coming or existing plant; driven into great heaps by the wind, it not only injures both, but also renders transport over the roads difficult or impossible.

A WORD ON THE PRESENT AMOUNT OF FOREST IN ONTARIO.

It will be seen by the accompanying list that the state of Ontario, as regards possession of forest land, is as follows:—On the northeast she has a large forest, and in Muskoka and Georgian Bay District forests of some size. These are all the Province possesses to feed the streams, we may say, east and northeast of Toronto, and they largely at present perform that function. But the whole great peninsula to the west is destitute of most of the original forests on the elevated lands which gave her rivers water, and has little in the way of woods save the small reserves farmers have kept for themselves on their farms. As I pointed out previously, these are being rapidly used; one after another they fade away from the land and are not replaced. The accompanying lists will show exactly the acreage under wood still left in each county, and when we remember that but a century ago all was forest, we shall be amazed at the rapidity of destruction; and, noticing how fast the small reserve is disappearing, we shall be quite convinced that in a very few years, unless remedial measures are successfully applied, the great peninsula of Ontario—our chief territory in a farming sense—will be to all intents and purposes a deforested land. And I may here observe the fallacy of the statement sometimes ventured, "Oh, we cannot be in want of forests, there are so many million acres in Ontario, and of them only so many are cleared!" May I ask what this has to do with the question? Neither the woods of Keewatin nor Muskoka can in any degree assist the farmers of the great Ontario peninsula, from Windsor on the west to Toronto and Collingwood on the east. Nor will the small patches left on each farm assist them. They are too small and too isolated, and far too certain to vanish, to maintain the proportion of shaded land necessary for climatic influence. But these districts, it is said, give fair crops now. They do not yield so easily as once, nor is the sky so propitious now, as the careful investigations of Dr. Bryce and Prof. Dewey, some pages back show. But the great point is this,—they soon will, in all human calculations, suffer severely. Now, if the matter be commenced in time, we have yet space, before it be too late, to carry out what all civilized countries have acknowledged the necessity of and are to-day engaged in,—the work of making provision for a continuous forest area, and constant supply of merchantable timber.

Something can be done, and no doubt should be done, in certain parts of Ontario towards replanting our destroyed forests—destroyed in localities where forest, to improve climate and subserve agriculture, should especially be allowed to remain. But the great opportunity which yet remains is that of preservation. This is found to be the case in India. The Government of that great country, expending yearly its hundreds of thousands of pounds sterling for preservation and replanting, has not yet planted a hundred thousand acres, while it has improved, is improving, and has to a very great extent, already changed for the better, the character of many millions of acres of forest land. If we pass through much of the forest which Ontario still retains in governmental hands, we shall find, here and there, many a large expanse desolated by fire and growing up again, a brushwood choking itself to uselessness, covering a burnt and impoverished soil. We shall find great areas of forest the lumbermen have culled of pine and spruce, of ash and oak. Every here and there are the relics of their operations—the close hewn stump, and, a goodly distance therefrom, the great pile of decaying branches where the head of the tree had fallen; while the whole distance between, if round timber had been got out, shows nothing but a few scattered side limbs, but if square it is paved with immense pine fragments—short thick slabs whose deep clean cut show the force of the scorehacker's arm, and long lengths of those peculiar chips, slightly connected, thin and broad, smooth on one side, the depth and straightness of which show how deftly the the handler of the broad-axe has plied his unwieldy tool; and if you come near the stump, and it has been heavy timber squared for the English market, you will find in great masses, hewn off, thrown away and rotting, as much clear timber as, sold at Toronto prices, would go far towards the whole sum the lumberman will ever get for the log. The piles of *debris* are everywhere, and form a most inflammable portion of the touchwood of a forest. Then before the strong oxen could drag the great log to the river down which it had to be floated an avenue of smaller trees had sometimes to be cleared from the way, and these likewise piled in desicating heaps, their skelton branches protruding among the green undergrowth, like the ghastly relics of mortality on a forgotten battlefield, cumber the forest floor.

You will find many places where trees are choking one another for want of air and light, until in lapse of years some stronger one will tower above their fellows. You will find places where hurricanes have cut their way through the forest, and the trees lie for miles, as the ranks mown down by the mitrailleuse. You will pass the solitary bush road, the trees which once grew therein chopped right and left into the forest by the makers of the track, where they lie in a dry heap for miles on miles, forming as pretty a fire-track as one could wish to see. And everywhere you will find millions of of young trees giving full promise, if spared axe and fire, of becoming trees as sturdy as any the lumberman has carried away, but nevertheless, the impression produced on you by the whole pilgrimage will be that, if no preventive measures be used, the fire which has taken so much already will sooner or later take the rest. When one compares the state of our forests with that of those in some parts of Europe, and thinks of the long avenues of fire-breaks, the forest-rangers on the watch, the careful management, the incessant thinning and replanting, the long succession of goodly trees yearly ready for the axe, and the certainty, with equal care, of such a succession for all time to come, one is apt to think it full time that some such system were introduced here.

RAVAGES OF FIRE.

To show what loss is being incurred by the fires which run through our forests, let us take up the report of the Commissioner of Crown Lands for 1882. There are 9 reports of surveys. Let us see what they say in succession:—

TIMBER BERTHS NORTH OF FRENCH RIVER.—The greater part of my line passed through a burnt country, the fire having gone over some parts a second time. Over this burnt country all the timber has been killed."

"TOWNSHIP OF DUNNET.—Over one-half of this township has been burnt."

"TOWNSHIP OF HUGEL.—The greater portion of this township has been overrun by fire and the timber destroyed."

"TOWNSHIP OF RATTER.—About one-sixth of the township has been burnt over, all the timber being destroyed by fire."

"TOWNSHIP OF KIRKPATRICK.—Nearly the whole of the township has been burnt over."

"TOWNSHIP OF HAGAR.—Bush fires have destroyed nearly all the timber."

"TOWNSHIP OF FIELD.—No mention of fire."

"TOWNSHIP OF DRYDEN.—The greater portion of the timber has been destroyed by fire."

"TOWNSHIP OF WILKES.—Not injured by fire."

In last year's report, out of fifteen surveyor's statements eleven speak of the ravages of fire.

THE PINE LUMBER REMAINING.

The latest opinions of value procurable on this head are perhaps those given by Messrs. Drummond, Little, and others who have studied this subject, at the last year's Forestry Convention. Maine and Michigan were mentioned. At Bangor, long famed for vast lumber mills, only fourteen million feet were procurable in 1877, against over one hundred million in 1856. The whole Saginaw valley, Michigan, the very home of the lumber trade, is nearly culled. What this means may be imagined when we learn that it has been cutting with mills of six hundred million feet capacity. Their lumber journals declare that in all Michigan, Wisconsin and Minnesota—the western pine States. there is not ten years' supply with the present demand. We may, I think, consider that the demand is likely to increase, perhaps to double. With this, and especially if they have a recurrence of their terrible fires, there may not be five years' supply. Concerning Ontario, we are told that Mr. Little has consulted the best authorities, and is persuaded that in Canada (5,000, Quebec: 3,500 Ontario; N. B. and N. S. 1,500) we have but ten thousand million feet of pine, while we are at present cutting a thousand million feet yearly, leaving ten years' supply. Consider this in the same light, and look at some Canadian fire statistics further on, and we may well doubt whether we have five years' supply. In Newfoundland there is little good pine left. It must be noted that a well-known lumberman, Mr. J. K. Wood, puts the amount manufactured yearly in Canada at nearly two thousand million feet, adding to pine spruce and other woods. If we count the pine timber remaining in the States, we shall find that, after Michigan, Minnesota, and Wisconsin are exhausted, say in seven years, there will probably be twice as much, say fourteen years' supply in the other States, such as the large and slowly decreasing forests still standing in Arkansas, Louisiana, and California.

In view of these facts, let us observe what will, in a few years, be our position in Ontario, or even in Canada. We have but between five and ten years' supply. The Americans have their Southern and Pacific States as a reserve, where, though at great cost of carriage, they may obtain pine. But Ontario has no such reserve. In a few years we shall have but some districts of woodland to our north and northeast, culled of their best pine, and alternated with great sections over which the fire has swept, while the rest but wait for it to arrive, that the destruction may be complete. At one of the late forestry conventions, Mr. Thistle, a lumberman and surveyor, gave it as his decided opinion that ten times as much lumber was destroyed by fire as by the axe. Let us carry this to its conclusion. We have been exporting perhaps twenty million of dollars worth yearly. What if we have been losing two hundred millions? Is it not time—would it not pay fifty-fold—would it not still pay—to give the care to preserve our forests that Europeans give theirs? It was thought that this was a wooded country, and that there was no such danger. I would ask my readers to study the descriptions of European forestry in other of these pages. They will not be able to avoid the conclusion that, in a few years, Germany, Prussia, and other European countries will be better wooded than Canada. We will glance a moment at what is told us of the forest when the lumbermen have culled it. Here is one description by Mr. Ward, a Canadian lumberman:—"To the uninitiated traveller through the woods, after the shantymen have taken all they think worth taking, he would hardly notice the chopper had been there, except for seeing an occasional stump, a few chips, or the top of a tree." Now we will take another, Mr. Smith, in the "Flora of Michigan":—"The valuable trees were felled years ago, and the lumbermen moved on to fresh spoils, leaving behind an inextricably confused mass of treetops, broken logs, and uprooted trunks. Blackberry canes sprang up everywhere, forming a tangled thicket, and a few scattering poplar, birch, and cherry trees serve for aboreal life, above which tower the dead pines, bleached in the weather, and blackened by fire, destitute of limbs, and looking at a distance not unlike the masts of some great harbor. Thousands of such acres, repellant alike to botanist and to settler, can be found in any of our northern countries." What we had better conclude, I fancy, concerning the difference between the two, is that the second had undergone a second and yet sharper and more reckless culling, after it had passed the stage described by Mr. Ward. It is evident that the time has passed when it was a matter of choice to attend to forest preservation in Ontario. If we are to retain any, it is now an affair of immediate necessity.

In fine, if we wait longer, our forests will be gone, and can then not be renewed, except at the vast expense of time and money required in planting.

If we move energetically now, we can preserve great forests, the maintenance of which is most necessary to our prosperity, and shall also have time to plant, where no other means exist.

FOR a hard cold, with pain in the head, bones, or through the chest, take DOWNS' ELIXIR, at once and in liberal doses, cover up well in bed, and our word for it, you will soon be well.

BAD DRAINAGE.—There is nothing more productive of disease in a neighbourhood than bad drainage. Open the culverts and sluiceways and purify the locality. The objections in the human system may be remedied in a similar manner by Burdock Blood Bitters, which opens all the outlets of disease through the Bowels, Liver and Kidneys,

THE OTTAWA VALLEY CUT.

In summing up the lumber trade of last year it was said to exceed by far that of any previous season. This was caused by the early breaking up of the ice, steady flow of water, brisk demand and long open season. This supplied the mill owners with plenty of water and opportunity to get their logs down, which was all they wanted for a good season's harvest. Favorable as last year was, it was hardly more so than this, though the season opened a little later in '83 than the previous season. Since last year, only one serious misfortune has occured; viz: the burning of Messrs. Gilmour & Co.'s steam saw mill, acerοss the river, on the evening of the 8th of August last. By this conflagration the firm lost directly in the neighborhood of $125,000, partly covered by insurance, and in addition to this large amount have lost ten weeks of their season's cut. To counter balance, in this advance, as it were, extensive improvements have been made. Mr. E. B. Eddy, whose establishments were burnt on the 3rd of November 1882, has rebuilt on a grander scale and can if he chooses double his last year's capacity. Messrs. Bronson & Weston built a new dam during the winter and made other valuable improvements. Messrs. Sherman, Lord and Hurdman erected another mill, and have doubled their capacity, while all other mill-owners added more or less to the working arrangements of their mills, The demand for lumber has been somewhat duller than last year though a larger quantity has been shipped. The piling ground has been extended and at the present time there is more lumber in the city and suburbs than at any previous time. Below will be found estimates of the year's cut by the principal mills in this vicinity, the figures being obtained after diligent search by a reporter of this paper among those who have a good opportunity of knowing the state of the trade:

Sherman, Lord & Hurdman's mill, Hull	35,000,000
E. B. Eddy's, Hull	80,000,000
Bronson & Weston's, Ottawa	60,000,000
J. R. Booth, Ottawa	55,000,000
Perley & Pattee Ottawa	40,000,000
Capt. Young, Ottawa	20,000,000
Rochester's, Ottawa	10,000,000
McLaren's, New Edinburgh	20,000,000
McClymonts, New Edinburgh	25,000,000
Gilmour & Co., Hull	40,000,000
Conroy Bros., North Shore	35,000,000
Allan Grant's South Shore	10,000,000
McLaren's Carleton Place	30,000,000
McLaughlin Bros. Arnprior	30,000,000
Gillies Bros. Braeside	35,000,000
Pembroke Mills	28,000,000
W. C. Edwards & Co. Rockland	50,000,000
McLaren & Co	65,000,000
Gilmour's Gatineau Mill	25,000,000
Hillman's Rock Cliff	4,000,000
Total	747,000,000

There are a number of other mills, whose cut could not be accurately estimated, but with the cut will doubtless equal that of last year which was estimated at 800,000,000 feet. The estimate on an average is probably lower than the actual figures, and as none of the mills have stopped running yet the quantity at the close of the season, may be much larger, as the mills cut 30,000,000 per week. In last year's estimate the production of the North Nation mill was given as 25,000,000. During the winter this mill was demolished, Mr. Edwards having decided to work the Rockland mills only.—*Free Press.*

The Coming Forestry Exhibition.

The regulations of the Forestry Exhibition to be held at Edinburgh next year state that the exhibition is intended to include everything connected with, or illustrative of, the forest products of the world, and that it will be open to exhibitors from all countries; that the enrries will close on the 1st of March, 1884, and that exhibitors will be charged 1s. per square foot of floor space. Arrangements will be made by the committee for the reception of exhibits at a date to be fixed, but all fulminating and explosive substances all dangerous materials will be absolutely forbidden to be sent. Medals, money prizes, and deplimas for exhibits and essays will be awarded by competent jourors. Contributors to the loan department are requested to communicate with the secretary Mr. G. Cadwell, 3, George IV. Bridge, Edinburgh, who will supply special forms to be filled up, The committee, it is further stated, will endeavor to obtain from the various British railway companies special terms for the conveyance of exhibits to and from the exhibition, and such arrangements as will be duly intimated to to exhibitors.

St. John, N. B.

The *News* says:—From information of a reliable character at the *News* command, it would appear that the lumber harvest for the present season will not exceed 225,000,000—a falling off of fully 33⅓ per cent from the usual crop. The above quantity is made up as follows:—Upper St. John 15,000,000; Aroostook 40,000,000; Tobique, Meduxnakeag and other streams, 25,000,000; Nashwaak 20,000,000; St. Croix, 15,000,000; Bay of Fundy, 12.000,000; Miramichi (N,W. & S.W. branches), 80,000,000; scattering lots on north shore. 18,000,000. Total, 225,000,000. Last season, 358,000,000 comprised the total output. In 1874, 389,000,000 of spruce were cut in this Province and Aroostook, Maine, townships, which was almost entirely handled by provincial operators who in recent years have almost monopolized the rich Aroostook log aroas.

Joinery in New South Wales.

There are in this colony, says a contemporary, several large joinery works, fitted with the best labor-saving machinery and the most modern appliances used in the trade. The establishments of Messrs. Hudson Bros., Messrs. Goodlet & Smith, and Mr. John Booth, at Sydney, employ a large number of hands to meet the requirements of the colonial contractors. At Messrs. Goodlet & Smith's establishment about 100,000 feet of timber are sawn weekly, nine-tenths of which consist of colonial hardwood, cedar, beech and pine. Nearly every sort of building materials is manutactured by the firm. They have two large potteries, where sewage pipes from 3 in. to 24 in. in diameter, building and paving brick, and all descriptions of stoneware are made. The total number of saw mills, &c., rose from 112 in 1871 to 213 in 1880.

Submerged Forests.

The Mississippi river runs through a delta of made soil from Cairo to the mouth, 180 miles below New Orleans. This has all been formed by deposits of silt, or soil from the upper rivers, Close geological explorations disclose the fact that for hundreds of miles through these deposits, immense forest trees are buried, one over the other, with interspaces of sand. Ten distinct forest growths have thus been observed which it is thought have succeeded one another. Of those known as the baldheaded cypress, some have been found more than 25 feet in diameter. One contained 5,700 rings. In other cases huge trees have grown over the stumps of others exactly as large. Taking these facts for data, the antiquity of the whole is estimated at 100,000 years, or an age of ten thousand years for each forest.—*Lumber World.*

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., wil send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

ANOTHER WITNESS.—A. Chard, of Sterling, testifies to the efficacy of Hagyard's Yellow Oil, which he used for a badly injured knee joint. It is now the great household remedy for inflammation, pain, soreness, lameness, etc., and is used both internally and externally with infallible success.

A WRONG OPINION.—Many a dollar is paid for prescriptions for some disease that never troubled the patient, and when the sole difficulty was worms, which a few of Freeman's Worm Powders would remove. These Powders are pleasant, safe and sure, contain their own cathartic, and are adapted for children or adults.

A WONDERFUL RESULT.—A single bottle of Dr. Low's Pleasant Worm Syrup has frequently destroyed from 100 to 200 worms. It is pleasant to take—no other cathartic being required. Tape worms have also been removed by it, of 15 to 35 feet in length. It is effectual for all varieties of worms afflicting both children and adults.

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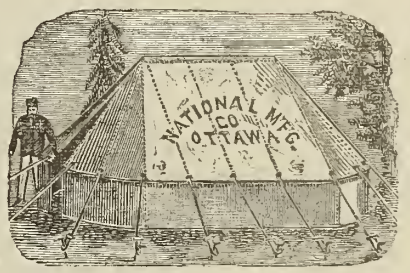

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Market Reports.

TORONTO.

From Our Own Correspondent.

Nov. 23.—The lumber trade in this city is at the present time exceedingly dull, at the retail yards men and horses standing idle, and, as a necessary consequence, wholesale dealers are in about the same depressed condition. Retail men say, as a matter of course, as we are unable to sell it is useless to buy, and by the time the plasterers' union and the masters come to an arrangement the winter will have settled the difficulty for them, so far as this season's work is concerned. There are still some shipments being made from the docks, which may, if the weather keeps fine, continue to the end of the month. I will then endeavor to give you the total amount of shipments for the season or as near as it is possible to collect them.

The amount of lumber arriving by rail is quite small and the roads dependent on the lumber traffic for a large portion of their earnings will make a poor showing for the remaining portion of the year, and before the end of the coming year, 1884, I venture to predict, without laying claim to the title of prophet, that the petty question of charging one dollar for shunting cars to the various sidings within the city limits, will be overlooked by the more serious and imperative considerations of how to make both ends meet. The mileage made as lumber earnings by the roads mainly dependent on that industry have not come nearly up to the expectations formed at the commencement of the season, so that some idea may be easily formed as to the result of next season's earnings now that the banks have declined to advance to mill men to enable them to stock up for the next season's cutting. The number of manufacturers who are able stock up independently from outside assistance are extremely small, and north of this place the largest operators have their mills situated in positions where the water routes come into competition with the rail traffic and the wants of the western trade will be mainly filled by the water routes from the places indicated. Through overgrasping the railway companies have lost the bulk of this western trade never to return again. Now to come to the small operators, denied that assistance from the banks extended to them in former years, they can only produce to a limited extent, and, in numerous cases, not at all, so that the amount of decrease in the lumber carrying trade for the season of 1884 may be safely set down as not less than 50 per cent. of that of the present year. This may be a blessing in disguise, time alone can determine that.

Prices at the yards are nominally the same, at all events so far no cutting in figures that would justify me in altering previous quotations:

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅝ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ₩ M	3 00
Sawn Lath	2 50

MONTREAL.

From Our Own Correspondent

Nov. 24.—As the dullness consequent upon the coming of winter is again upon us, business has been pretty slow for the past two weeks. Navigation is now closed for this year and nothing but a retail trade is looked for till spring. During the year business has not been considered satisfactory and not equal to last year's, for, although a good deal of lumber has been moved, prices have not left so much margin. We have again to notice an advance in the price of laths, which are selling at $2.00, but $2.25 is expected to be the price in future. The work on the new lumber basins on the canal has ceased for the season. In order to facilitate business the G. T. R. Co. are thinking of bringing their track down William street in front of the new basins, which will be of immense benefit to the lumber trade. With the exception of laths our quotations ex yard are unchanged:—

Pine, 1st quality, ₩ M	$35 00@40 00
Pine, 2nd " ₩ M	22 00@24 00
Pine, shipping culls, ₩ M	14 00@16 00
Pine, 4th quality deals, ₩ M	11 00@12 00
Pine, mill culls, ₩ M	10 00@12 00
Spruce, ₩ M	10 00@13 00
Hemlock, ₩ M	9 00@10 00
Ash, run of log culls out, ₩ M	20 00@25 00
Bass, " " ₩ M	17 00@20 00
Oak, ₩ M	40 00@50 00
Walnut ₩ M	60 00 100 00
Cherry, ₩ M	60 00@80 00
Butternut, ₩ M	35 00@40 00
Birch, ₩ M	20 00@25 00
Hard Maple, ₩ M	25 00@30 00
Lath, ₩ M	2 00@ 0 00
Shingles, 1st, ₩ M	3 00@ 0 00
Shingles, 2nd, ₩ M	2 50@ 0 00

CORDWOOD.

The weather for the past two weeks has been very mild and there has been very little demand for wood, but prices, though unchanged, are firm, and are quoted ex cartage as under:

Long Maple	$ 6 00
Short "	5 50
Long Birch	5 50
Long Beech	5 00
Tamarack	5 00

SHIPMENTS.

The shipping season is now over and we expected to have been able to give the totals of shipments both to South America and Britain, the latter we cannot give till next report. The exports by the Export Lumber Co. from the St. Lawrence to the River Platte during 1883 were as follows:—

Pine	12,438,647
Spruce	6,330,005
Ash	10,000
Total 1883	18,778,652 feet
1882	21,419,827 "
1881	16,147,911 "
1880	10,420,080 "
1879	12,476,150 "
1878	10,855,246 "
1877	8,787,928 "
1876	3,437,000 "
1875	10,123,000 "
1874	16,262,293 "
1873	36,073,919 "
1872	28,234,968 "
1871	16,005,935 "
1870	25,115,183 "

LIVERPOOL MARKET.

The consumptive demand for the month of October was considered satisfactory, but great caution is recommended on the part of shippers here, owing to the shadow hanging over the political atmosphere. Spruce deals from St. John, N. B., sold at £6 15s. per standard, ex quay, and in some instances a little more was obtained. The following are quotations for Quebec pine deals, &c.

DEALS.

		£	s.	d.	£	s.	d.
1st quality Quebec pine ₩ standard		21	0	0	22	0	0
2nd do. do.	do.	15	0	0	16	10	0
3rd do. do.	do.	9	10	0	10	0	0
St. John, N. B., &c., Spruce	do.	6	15	0	6	15	0

MUSKOKA.

Nov. 14.—The weather in this district has been very wet for some time past. Smith river is much higher now than it was last spring, and is a very great hindrance to improvements in the rapids and shoots of that stream.

Mr. David Moore has a gang at work here who seem to progress notwithstanding the great floods.

There is a considerable amount of lumbering carried on here. Mr. W. Allen is getting out a large raft of square timber, and he has now two shanties at saw logs. He will fill the river himself. He cuts his lumber in the township of Hemsworth. Mr. P. H. Colton is a piece further up the river in Laurier, cutting and making square timber, which promises to be a superior article.

Mr. David Moore is getting out a raft in the Township of Gurd, which no doubt will be a large one. The Messrs. McLean are cutting logs still further up; also Messrs. Sereny and Fraser at saw logs, and a concern from the Georgian Bay, the Boyd Bros. are making a great raid on the pine up South River. There is scarcely any red pine in this locality. Settlers are still shoving in from the outside world, and commencing a life amongst the maples. In some places here they have to build the walls of their house with maple, for want of small pine or any other sort of soft wood. Snow fell yesterday and last night about eight inches, which will probably compel the runners to take the place of wheels and will be a godsend to the horses of this country.—*Ottawa Free Press.*

ALBANY.

Quotations at the yards are as follows:—

Pine, clear, ₩ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ₩ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1¼ in. siding, select	42 00@45 00
Pine, 1¼-in. siding, common	18 00@19 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ₩ M	40 00@43 00
Ash, second quality, ₩ M	25 00@30 00
Cherry, good, ₩ M	60 00@85 00
Cherry, common, ₩ M	25 00@35 00
Oak, good, ₩ M	40 00@43 00
Oak, second quality, ₩ M	20 00@25 00
Basswood, ₩ M	25 00@30 00
Hickory, ₩ M	40 00@40 00
Maple, Canada, ₩ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ₩ M	35 00@40 00
Shingles, shaved, pine, ₩ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ₩ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of Nov. 24, says:—There is no particular change in the market, but a little lull is noticeable, probably preparatory to arranging business on a winter basis. Arrivals at the roads have been large in view of the advance in freights, but mainly it is believed on orders. Western pine of medium and choice grades holds steadily, with dry stock quite firm. Eastern lumber is steady and in fair demand. Southern pine moves along at just about previous prices, with orders mainly for small lots. Good desirable walnut sells quite well, as does also ash. Whitewood moves slowly, with an over supply. Oak is rather dull. Really choice select cherry finds a ready market. Clear maple for flooring is in request. Clapboards are going well. Laths continue pretty firm as yet, but the supply is improving.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots:—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of Nov. 24th, says:—The sudden termination of active shipping operations on the lakes, consequent on the disastrous gales last week and the week before, has given a quiet appearance to the market docks the present week. The total of cargo arrivals for the week ended Wednesday was but 64, the larger proportion of which went directly to the yards. The lumber coming to the market has been largely inch stuff, mostly green, and has sold at prices a shade stiffer than values prevalent before the great blow. There has been nothing like an assortment offered, and few buyers could get what they wanted, and purchases have been made by those who needed what was offered to patch out stocks for the winter, and have been willing to forego insisting on concessions for the sake of getting the lumber. The season is acknowledged to be closing. Not much more lumber will be offered on the market, and dealers who lack anything in stock will have some difficulty in laying it down. A number have dry lumber over the lake to come forward, and were counting on a continuance of navigation season to get it over here, and now find themselves in rather bad shape. The demand for dry common stock is so active, and it is generally so meagre in supply, that the difficulty of procuring vessels to bring over the little remaining at east shore ports is likely to be seriously felt.

Quotations are as follows:—

Short dimension, green	$ 9 00@ 9 50
Long dimension, green	9 50@11 00
Boards and strips—No. 2	10 50@12 50
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 00@ 2 10
Extra A	2 20@ 2 60
Lath	1 65@ 1 75

Receipts of lumber, shingles, etc., for the week ending Nov. 22, as reported by the Lumberman's Exchange:—

RECEIPTS.

	Lumber.	Shingles.
1883	21,857,000	11,785,000
1882	52,958,000	32,033,000

FROM JANUARY 1, 1883, TO NOVEMBER 22, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	1,754,491,000	1,167,647,000
1882	1,980,909,000	935,748,000
Increase		231,899,000
Decrease	226,418,000	

STOCK ON HAND NOV. 1.

	1883.	1882.	1881.
Lumber	665,947,082	706,652,450	599,525,483
Shingles	389,972,515	278,158,150	249,960,400
Lath	83,359,413	63,527,227	44,156,782
Pickets	2,646,462	3,079,436	2,809,670
Cedar posts	751,571	150,835	211,297

OSWEGO, N. Y.

From Our Own Correspondent.

The receipts of lumber since our last have been very light, lake rates having advanced beyond the views of dealers. Vessels are now fully occupied in the grain trade. Canal shipments have about ceased. Sales have been very light for the past week; collections have been good. The stock is ample for winter trade and holders are firm at the prices named in our quotations. Receipts for 1883, 180,000,000 feet, for 1882, 207,000.000 feet.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1¼ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@[illegible] 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LEITH.

The *Timber Trades Journal* of Nov. 10, says: The only arrival of importance during the past week is the Nicksburg, from Quebec, for Messrs. Park, Dobson & Co., with an assorted cargo of waney yellow pine and American hardwoods. This will be the only importation of American goods to this market during the autumn, thus showing that the demand for waney yellow pine in this district is light, though, of course, it must be taken into consideration that pitch pine is in many instances used where previously nothing but waney pine was put in. No sales by public auction have taken place during the past week; several, however, may be expected about the end of the month. The demand for Baltic goods is fair and prices are being maintained.

LIVERPOOL.

The *Timber Trades Journal* of Nov. 10, says: The import during the past week has again been moderate, and the quays are beginning to wear a bare aspect compared with the busy and overcrowded condition which they have shown for some time. The deliveries appear to be large, and this points to an amount of business doing that can only be characterized as being large, at the same time it is very doubtful whether much of it is of a profitable nature to the dealer.

Prices of all kinds of goods remain unchanged, which may be attributed to the fact that the unsatisfactory state of the staple manufactures of this neighborhood continues in a languid

condition, and hence the consumers are inclined to go on purchasing only for their immediate wants, so long as the market here remains in its present steady position, rather than lay in stocks and hold them, with their accumulating charges of interest, rent, and other expenses.

Spruce deals show no further advance in price, at the same time shippers appear to have confidence in the future, and are looking forward to an increase in prices.

On Wednesday Messrs. James Smith & Co. offered by auction a cargo of Bathurst pine and spruce deals now landing, and a cargo of sawn pitch pine timber and planks about now due, together with sundry other parcels of wood in store.

The attendance of buyers was very meagre, and there was no bid for any portion of the deals in the former cargo, only a few spruce deal ends being sold at £5 7s. 6d., and pine deal ends at £5 per standard, and of the pitch pine cargo only about twelve lots found buyers at from 15½d. to 17½d. per foot.

GLASGOW.

The *Timber Trades Journal* of Nov. 10 says: Transactions during the past week by public auction have been to a fair extent, as will be observed from the statement under noted. At the sale on the first inst. (Messrs. Edmiston & Mitchells, brokers) a good company was met, and a large quantity of square timber and deals changed hands, a portion of the catalouge being exposed without reserve.

With reference to the American pine wood trade it is to be noted that stocks are certainly accumulating, and prices over all are rather lower. Deck plank wood is not moving off so freely, as fewer new shipbuilding contracts are being made now in this district.

On 1st Nov., at Greenock, Messrs. Edmiston & Mitchells, brokers :—

		Per cub ft
Quebec waney boardwood—		
59 c ft av per log		1s 6d
Do yellow pine timber—		
45 c ft av per log		1s 4d & 1s 4½d
Do red pine—		
47 & 57 "		1s 5d & 1s 6d
Do oak—		
85 "		2s 5d
Do elm—		
40 "		2s 2d
30 to 40 "		1s 8d & 1s 9d
Do ash—		
35 "		2s 2d
19 "		1s 10d
Sawn pitch pine—		
35 c ft av per log		1s 3d
30 "		1s 2½d
The following goods without reserve :—		
Quebec waney boardwood—		
37 to 59 c ft av per log		2s 0½d to 2s 2½d
Quebec 3rd spruce deals—		
13 & 14 ft	9×3	10¾d & 11d.
10 " 11 "	9×3	9½d " 10d.
10 " 18 "	7/11×3	8½d " 9d
Do 3rd spruce deal ends—		
6 to 9 ft	6/9×3	7d & 7¾d
Do. 4th spruce deals—		
12 ft	9×3	9¾d
10 to 14 ft	7/13×3	9d & 9½d
12 "	6/9×3	8½d
Do. 4th spruce deal ends—		
6 to 8 ft	6/9×3	7¼d & 7½d
Do. 4th pine deals—		
9 to 18 ft	6/21×3	9d
Do. 4th pine deal ends—		
6 to 8 ft	7/17×3	7d

On 6th Nov., at Glasgow, Messrs. Edmiston & Mitchells offered some States black walnut, and sold a few lots (av. square 15¾ in.) at 3s. 10d. to 4s. 3d. per cubie foot.

LONDON.

The *Timber Trades Journal* of Nov. 10, says: The tone of the timber market is undoubtedly bolder than it was a short time ago. People give a favorable opinion of the future without fear of being heard with sneers or met with smiles, for the belief is becoming pretty general that affairs are mostly on the mend. If they do not actually advance, the time for making concessions in prices has evidently passed, and those who hold good stocks can sooner or later depend on getting their price, if they do not look too high,

No attempts on the Stock Exchange seem to succeed in making money dearer, and when this latter commodity is cheap trade ought to flourish. Neither is there any excess of imported timber as yet in the country to make its weight felt. The supply has been plentiful, but so have the deliveries to the consumers, and few seasons have perhaps shown a steadier demand throughout than that which is now hastening to its close. There has been a good deal of bad business doing among builders, and the suspension of some large firms has stayed the hands of many smaller ones, which reflected unfavorably on the timber merchants, but there has been so much good and legitmate business done that the other was only a drag on the wheels of the

THE AUSTRALIAN TRADE.

Messrs. N. Roberts & Co.'s report on the timber trade of Melbourne, just received, under date September the 19th, says :—Timber continues very dull, and we have no hope of an improvement unless shipments should prove to be very moderate indeed.

The arrivals of flooring boards have been excessive, and as importers show no inclination to hold, prices are declining. Red deals.—Imports "nil." The cargo ex Monarch, which has been in store for six months, was sold on 10 inst. by auction, at an average of 5d, per foot 9x3, and to day several parcels of deals ex London vessels were sold at an average of 4d. per foot 9x3. Russian deals ex Noel a few were sold at 5 5-16d. for deal sizes, and 4 5-8d. for battens. As the stocks in hand are very large the prospect for cargoes arriving is not a good one. Spruce deals.—Imports, 3,453 pieces. The parcel ex Scottish Prince from Boston was sold at from 4¾d. to 4d. per foot 9x3, ex Freeman from Boston, deals 11x3 fetching 4⅝d, to 4 1-16d. The bidding for 9x3 being only 3½d. they were withdrawn from sale.

Under date Sydney, August 23rd, the report says :—The unsatisfactory position of Scotch and Baltic timber, reported for some time past still continues, and the sales during the month are unimportant. In American timber there is a good demand for redwood, both rough and dressed. On July 25th, at auction, the following prices were realized :—Spruce deals, 3x9 to 11, 12s. 9d. per 100 ft. ; white lining, t. g. & b., 6x½, 10s, ; Baltic, t. & g.. 6x¾, 13s., 8x¾, 13s., chamfered weatherboards, 6s. 6d. ; red Baltic doors 6 ft. 6x2 ft., 6x1¼, s. m., 6s. 9d., 6 ft., 6x2 ft., 6x1½, 8s., 6 ft., 6x2 ft,, 6x1½ d, m., 9s. 3d. On the 1st inst, Baltic deals sold at 13s. 6d. to 17s. 6d. ; spruce deals, 10s. 6d. to 10s. 9d. ; white Baltic flooring, 1¼x6, t. & g., 20s. On the 8th inst., t. g. & b, white lining, 6x½, 10s. ; white laths, 6 ft., 4s. 3d., 4½ ft. 3s. 9d. ; Baltic deals, 7x3 13s. 3d., 8x3 13s,

QUEBEC CULLERS' OFFICE.

The following is a comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c. measured and culled to Nov. 23 :—

	1881.	1882.	1883.
Waney White Pine..	3,065,274	3,104,648	3,781,742
White Pine.........	6,029,041	7,961,695	7,405,523
Red Pine....	1,945,720	1,156,850	498,111
Oak................	2,994,477	1,313,109	1,916,322
Elm................	1,027,670	714,549	309,531
Ash................	408,798	310,769	263,448
Basswood	3,949	1,471	2,244
Butternut..........	3,033	2,639	1,118
Tamarac	27,150	51,975	37,736
Birch & Maple.......	151,774	269,661	138,803
Masts..............	51 pcs	33 pcs	—pcs
Spars..............	— pcs	51 pcs	— pcs
Std. Staves.........	418.9.2.26	564.9 0.22	680.4.3.26
W. I. Staves.........	595.7.2.19	1429.6.2.7	663.3.3.21
Brl. Staves..........	......	86.8.3.6	115.7.0.15

JAMES PATTON,

Quebec, Nov. 23. Supervisor of Cullers.

RAFTS ARRIVED.

The *Chronicle* gives the following list of rafts, etc., arrived at Quebec :

Nov. 15.—Price Bros. & Co., pine lumber, Town Wharf.

O. Latour (2), white pine, &c., Cap Rouge.

B. C. L. & T. Co., white pine, &c. St. Michael's cove.

S. J. Bennett, deals, &c., Mill cove.

Cook & Bros., white pine, &c., St. Michael's cove.

J. J. Calvin & Co. (2), oak, &c., sundry coves.

Stokes & Son, staves, Bowen's cove.

Price Bros. & Co., deals, Trois Saumons.

Ross Bros., deals, Montreal.

Lumber Yards on Fire.

OSHKOSH, Nov. 15.—The lumber yards of Stanhiller, Arnos & Co., and A. D. Peck caught fire this evening, and a fire broke out in the Morgan block near by. The flames got beyond control, and the Mayor telegraphed to Fond du Lac for aid. It burned over a large territory and consumed a large amount of lumber, G. W. Pratt's yard was consumed. Their loss is $75,000. The other losses are unknown.

WILLIAM COOK & SONS,
GLASGOW STEEL and FILE WORKS,
SHEFFIELD,
Manufacturers of Best Quality Steel, Files, Saws & Crucible Steel Castings.
1y AGENTS FOR CANADA:— L21
RAE & WATSON, 22 Church Street, TORONTO, Ont.

JONES & SON,
Wholesale Lumber & Timber Dealers
39 Broadway, NEW YORK.
Oak, Ash, Cherry, Black Walnut, Poplar, Butternut
And all other Kinds of HARDWOOD LUMBER.
White and Yellow Pine Lumber and Timber.
Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. L7

J. S. MAYO
IMPORTER AND MANUFACTURER OF
MACHINE OILS
OF EVERY DESCRIPTION.
9 Common Street, Montreal.
AMERICAN LUBRICATING OILS A SPECIALTY.
As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at
LOWEST MARKET PRICES.
1yL20

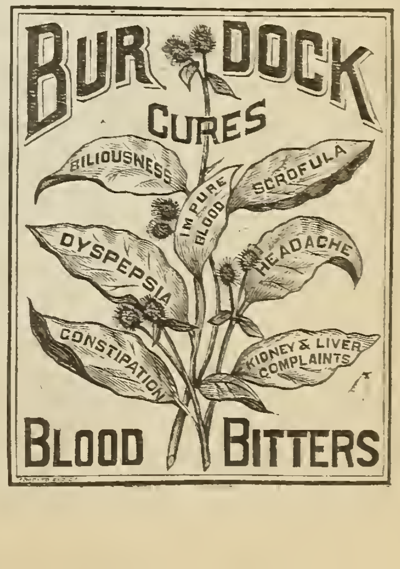
Canadian Timber Sales.

The *Ottawa Citizen* says :—One of the best sales in timber this season was that made recently by Messrs, Barnard & Mackay, of Pembroke, who disposed of a white pine raft consisting of 24,000 sticks to Dobell & Co., of Quebec at 29⅓ cents per toot.

New Brunswick Lumber.

The St. John, N. B., *News* reports that the lumber harvest for the present season in that province will not exceed 225,000,000 feet, a falling off of fully 33⅓ per cent. from the usual crop. The total is made up as follows :—Upper St. John, 15,000,000 ; Aroostook, 40,000,000 ; Tobique, Meduxnakeag, and other streams, 25,000,000 ; Nashwaak, 20,000,000 ; St. Croix, 15,000,000 ; Bay of Fundy, 12,000,000 ; Miramichi (northwest and southwest branches), 80,000,000 ; scattering lots on North Shore, 18,000,000.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy ; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address STINSON & Co., Portland, Maine.



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150 FRONT STREET EAST

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FILES FOR SALE. FILES RE-CUT

F. E. DIXON & CO.

MANUFACTURERS OF

STAR RIVET

LEATHER BELTING

70 King Street East, Toronto.

SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. ☞Send for Price List and Discounts.

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GEORGE BRUSH

14 to 34 King and Queen Sts, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Water Wheels, Mill Gearing, Shafting, Hangers and Pullies,

Hand and Power Hoists for Warehouses &c., &c.

Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

AND AGENT FOR 1yL21

"Water's" Perfect Steam Engine Governor, and "Heald & Sisco's" Centrifugal Pumps

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Established 1874.

Established 1874.

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Spinal Complaints, General and Nervous Debility, Nervousness, Rheumatism, Gout, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds and Indigestion.

Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, ESQ.—Dear Sir,—Please send me a waist bolt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,
C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1yL7

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patenteos and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills L7tf

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MOCOCK & SON

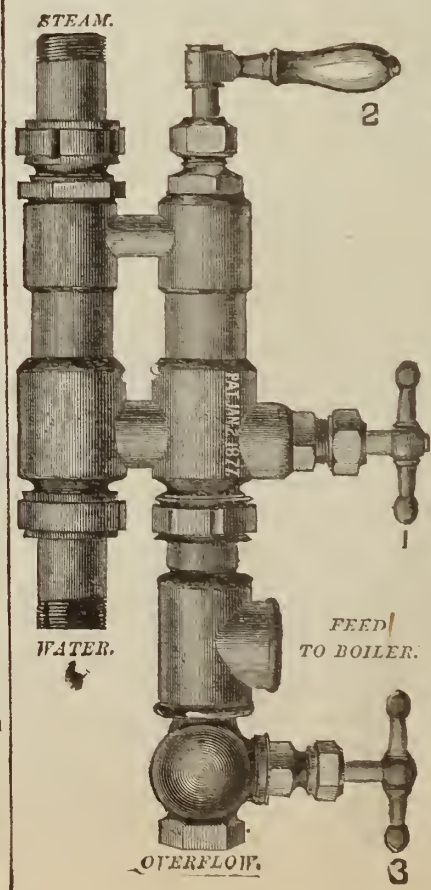
St. Gabriel Locks, - Montreal,

—MANUFACTURERS OF—

AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada. 12t20



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Hancock Inspirator

The Best Feeder known for Stationary, Marine or Locomotive Boilers.

THE INJECTOR PERFECTED!

All Sizes lift water 25 feet. No adjustment required for varying Steam Pressures.

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The William Hamilton Manufacturing Co'y

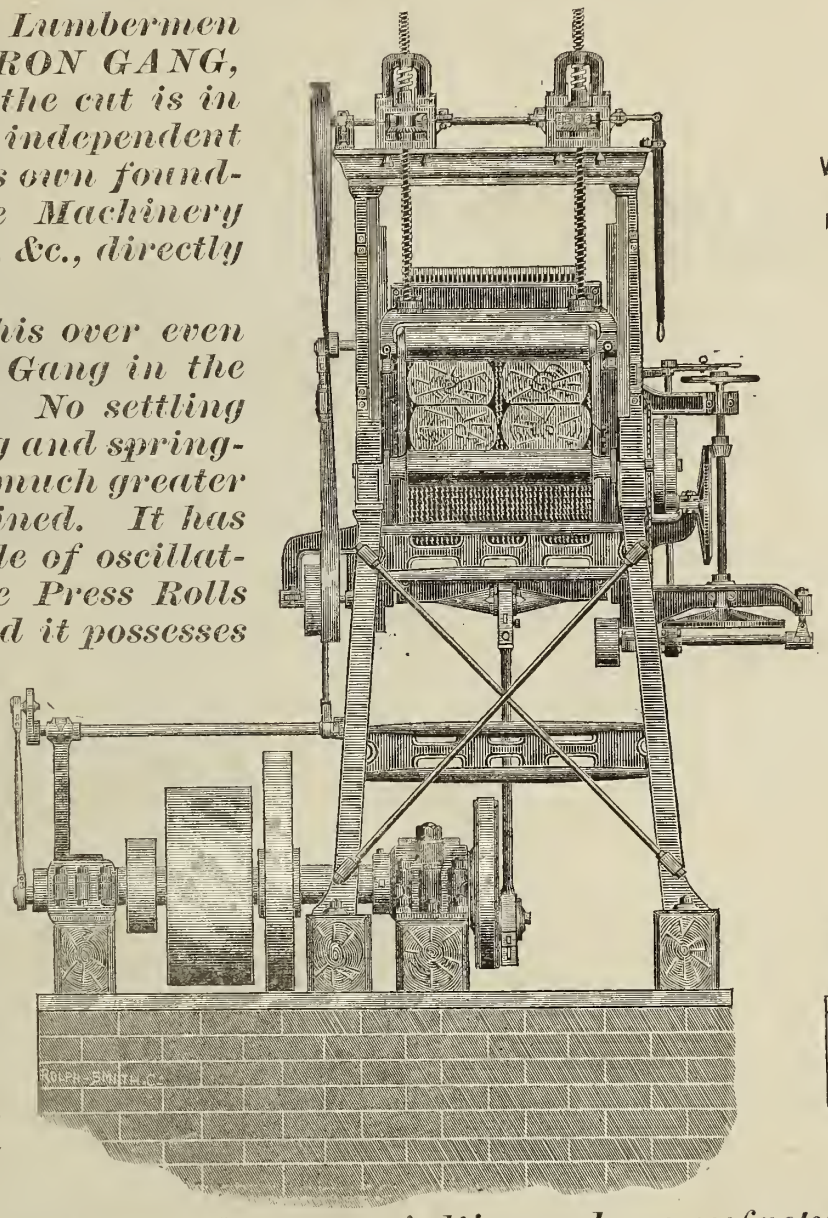
MANUFACTURERS OF (LIMITED,)

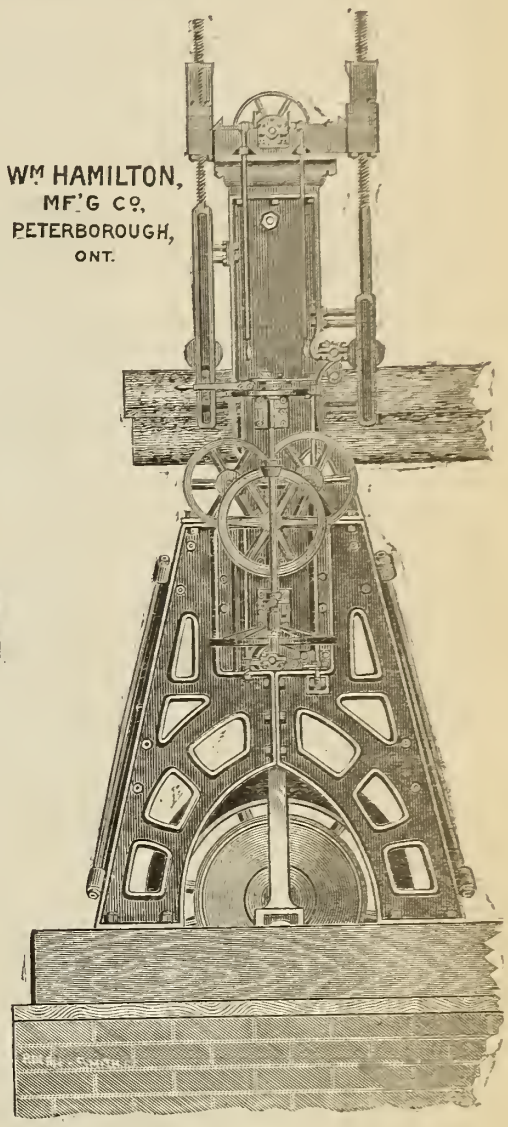
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

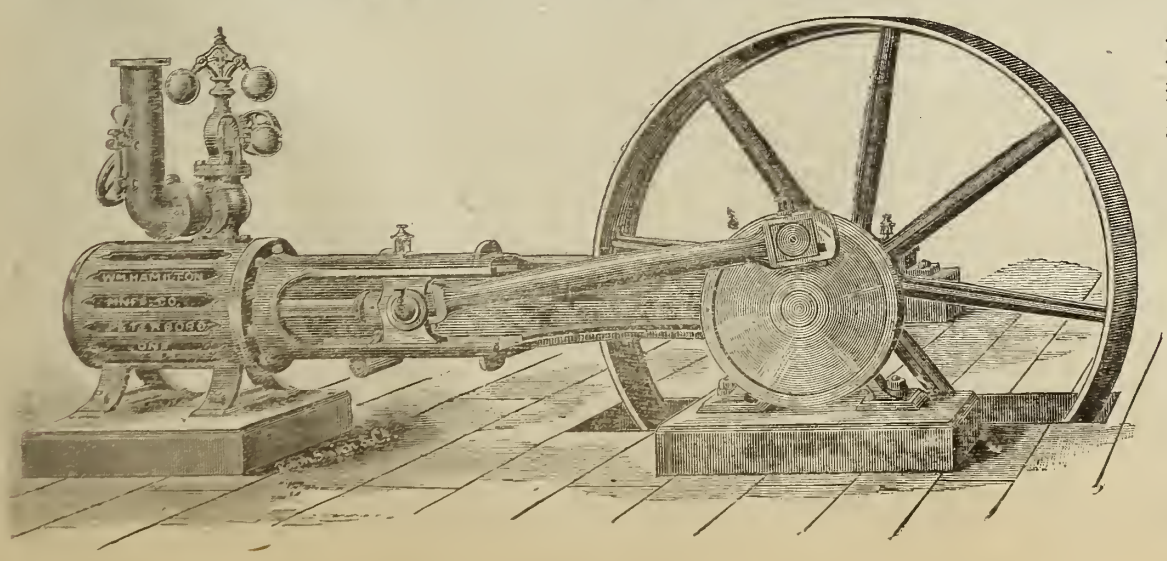




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

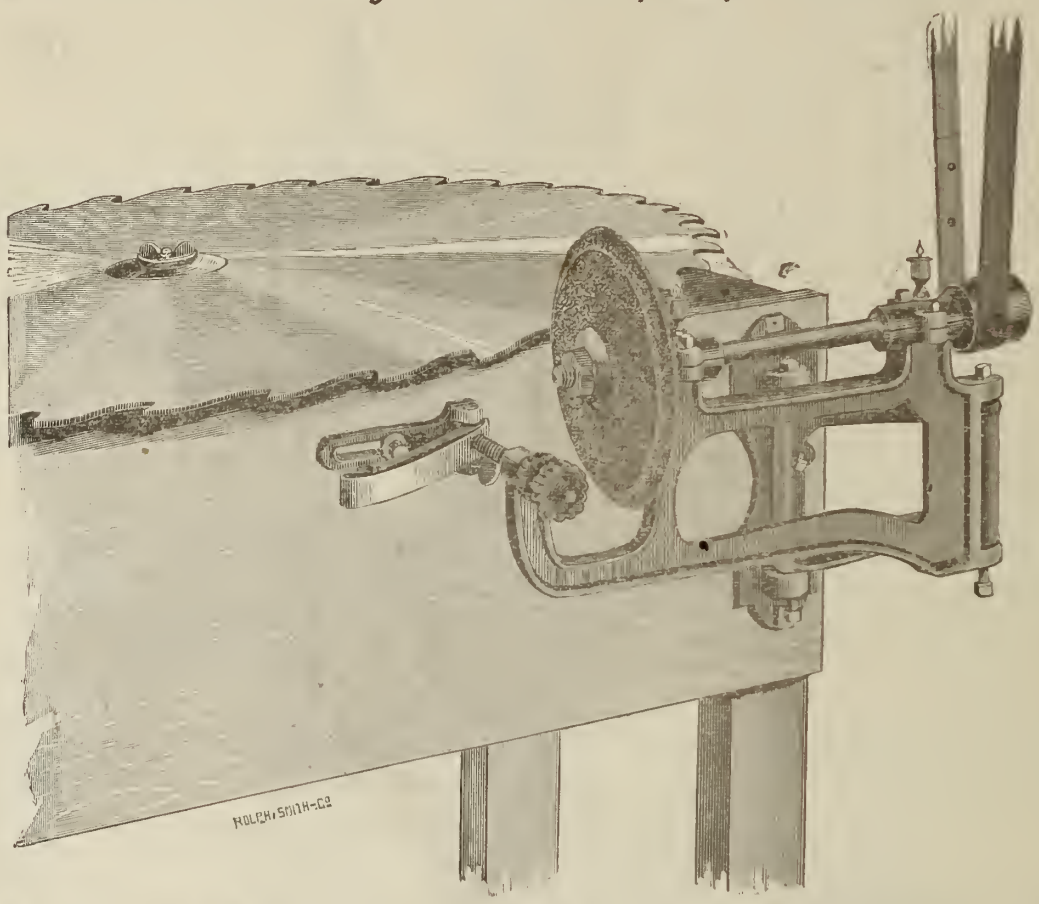
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Won't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
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McLAUGHLIN Bros., Arnprior, run two 66-in. Brooke Bit Saws, 800 revolutions per minute on 6 to 10-inch feed.

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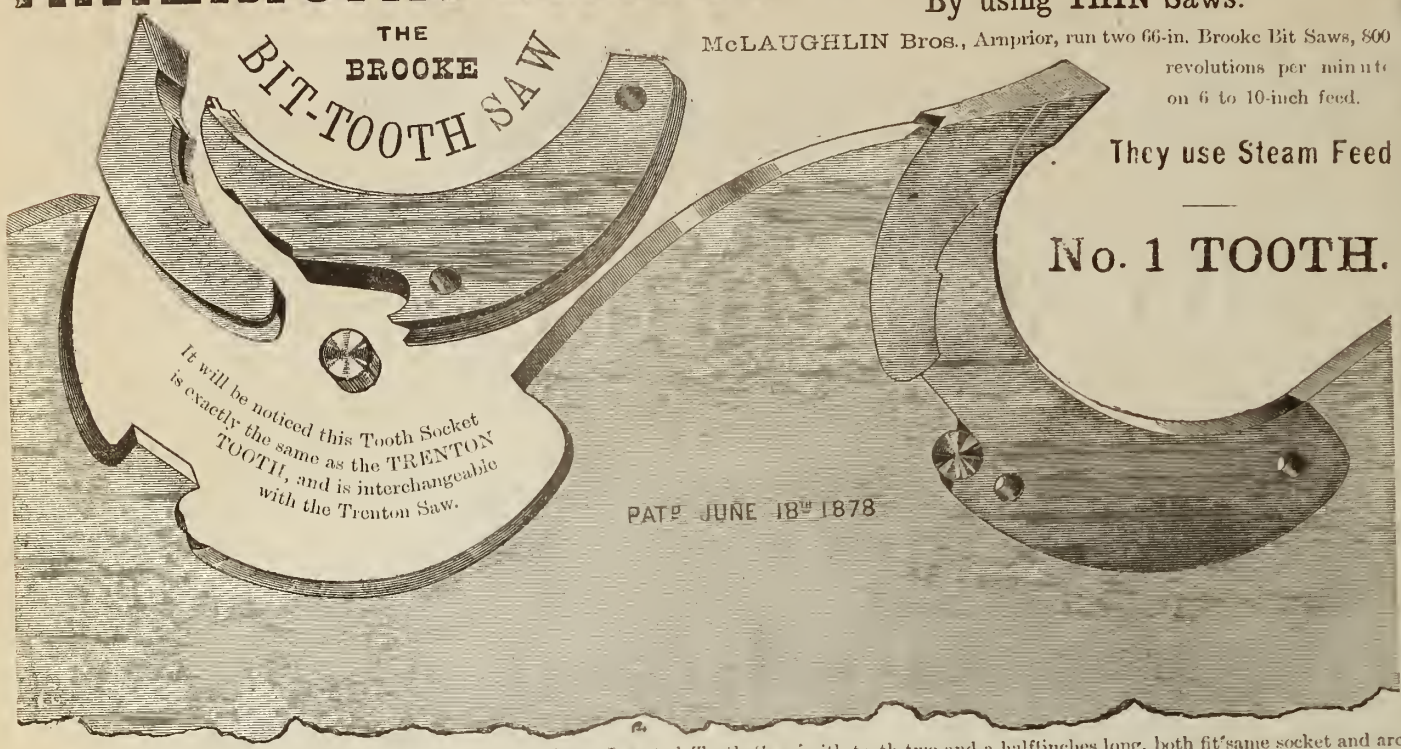
THE BROOKE BIT-TOOTH SAW



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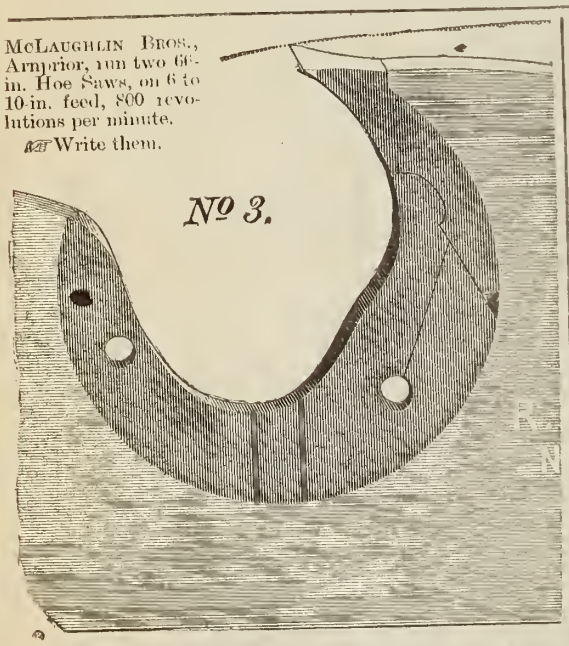

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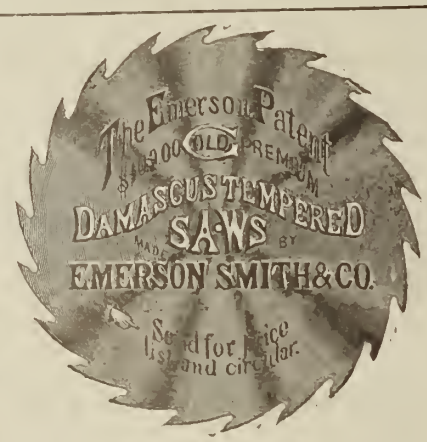

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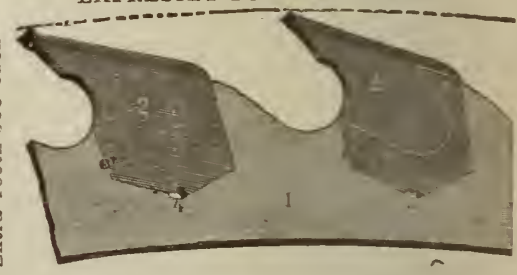

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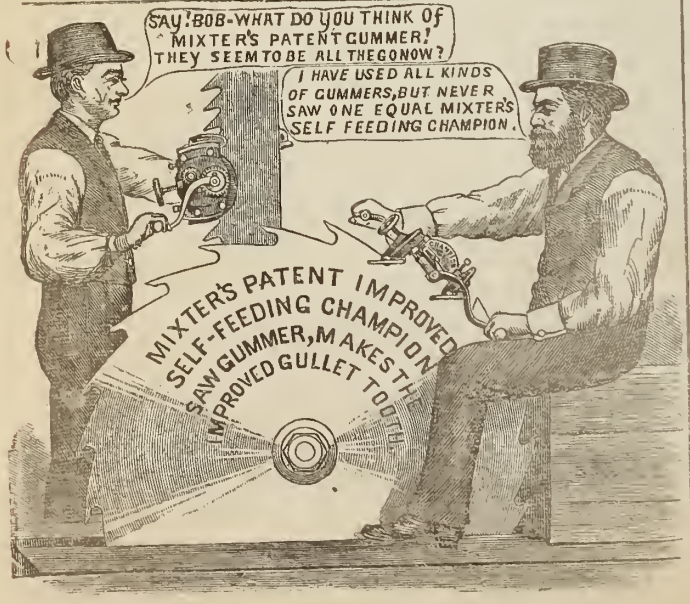

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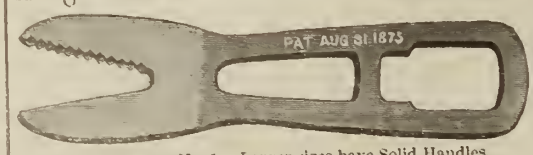

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VOL. 3. PETERBOROUGH, ONT., DECEMBER 15, 1883. NO. 24.

A MAMMOTH BUSINESS.

A special correspondent of the Toronto *Globe* writing from Deseronto gives the following account of the great lumbering establishment there :—

In the evening I went out to obtain an idea of the appearance of a town. which had struck me so oddly at first acquaintance, I didn't get over it ; it seemed to cover much ground. The streets run at right angles, the north and south ones terminating in a ridge overlooking the town. The buildings are very scattered, apparently quite as much so on the main street as in the outskirts. Young trees are planted along some of the streets. The residences, several of which are large and of good architecture, are of wood and very new, the town having grown up from a very small village to a population of two thousand in a few years. There are several good hotels, full of boarders, for the Messrs. Rathbun, whose lumber and other business is centered here, employ 600 or 700 men, many of them young mechanics. Progress is visible everywhere. Several commodious and even expensive churches has been erected within the last few years ; the latest, a R. C. Church, the site of which was donated by the Messrs. Rathbun, who have exercised a wise generosity in various ways in the community.

The business carried on by this firm of millionaires space does not permit me to describe. It includes the manufacture of fifty million feet of board and square lumber annually, 50,000 doors for export to Britain, ship building, shingle making, flooring, the manufacture of chemicals from wood, and of gas from sawdust. In fact provision has been made for the most economical use of all the fragments left in sawing up the the timber. The firm have also large saw mills at the Trent and near Belleville. The wood is floated down the Trent, Moira, and other rivers. In all there are nearly 2,000 men employed in winter by the firm, either in Deseronto and at the other mills along the bay, or up in the woods. The versatility of the enterprising firm is shown in other respects, for a little out of town they have a stock farm of 250 acres, on which shorthorns have been raised for a time, and latterly a fine herd of Jerseys, imported from the United States, and in charge of the manager, Mr. Howatt, a young American.

An interesting experiment, to learn the results and methods of which was my chief object in visiting Deseronto, is being conducted here in the manufacture of gas from sawdust, under an invention of Mr. George Walker, the foreman of the chemical works. Notwithstanding the extent and variety of the mills here, the quantity of wooden refuse is immensely superabundant, and how to profitably consume it was for many years a problem with the Messrs. Rathbun. The establishment of chemical works for making tar, methyllated spirits, and acetate of lime, disposes of part of the refuse, the consumption of sawdust and wood in creating steam power to work the chemical work and flouring-mill get rid of still more, but a cumbersome surplus yet remains. The material being thus almost worthless, a better place for the experiment in making sawdust gas could not well be found. Success in its fullest extent is not yet demonstrated to the satisfaction of the public, but is claimed will be in a few days when a number of the mills and buildings of Deseronto are to be lighted by the new gas, preparatory to its introduction in a general system of lighting for the whole town.

To see the appliances for manufacture, I visited the chemical works at early hour in the morning, in company with Mr. French, a young New York chemist, employed here in assisting to perfect the chemical operations. The first process in gas-making, as well as in the manufacture of chemicals, is undertaken in the end of the larger building, where the refuse of the saw mills is consumed. In this building, about ten feet below the side platforms up on to which a railway carries many steam cars and cart-loads of saw-dust, earth, and slabs every day, are four brick furnaces, and above these an equal number of large boilers. The car loads are dumped over into the great space before the furnaces from the track platform above, the wheels and gearing being kept from falling over, too, by a clamp device which holds the car on to the outer rail.

A little further on the platform stands above a sheet-iron floored receptacle, into which only saw-dust is dumped. Thence it is shovelled by a man into a box descending below the floor. Then an endless chain furnished with pails conducts the sawdust up and pours it on the top of a dryer made of horizontal iron plates, or rather flat inverted cones, raised one above the other. Steam passes up a tube in the central part of this dryer, and is distributed through the hollow of the cones. Around each cone revolves a steel bar, which for lack of a technical term to describe it, I will call a brush. From the topmost cone the sawdust is brushed over the edge, and falls upon the flat upper surface of the next lower cone, where a brush differently arranged sweeps it inward, to fall through on the third cone and be swept outward again. After passing over the hot suaface of these ten cones, and coming up by a bucket chain enclosed in a long hollow box, most of the fifty per cent. of water contained in new sawdust is gone.

From the boiler-room the sawdust is carried by a bucket across into the chemical works and droped into the range of deep iron receptacles in front of the retorts and above the front of furnaces. The close packing of sawdust several feet deep suffices to exclude the air from the retorts. Through the retorts which are horizontal cylinders, the sawdust is carried backward by archimedian screws, and discharged into an air-tight box. When this box is opened, as it is every few minutes, after turning a screw to close the pipe connected with it against the admission of air, the contents are found to be very fine charcoal, resembling coarse powder. The charcoal finds a ready market at all the powder factories.

In passing through the retort, vapor composed of various gasses is expelled from the sawdust. This vapor is conducted by a large pipe into a condensing reservoir, after passing through which the tarry fluid condensed from the vapor is set free and flows off from the end of a pipe into a large tank. Further processes, not differing in essentials from those in use in other chemical works, separate the various chemicals. The pyroligneous gas expelled from the retorts is carried by a pipe to the gas works, where it undergoes similar processes to those followed in coal gas factories. The illuminating gas thus produced is then conveyed for a storage to an immense isolated tank of 20,000 cubic feet capacity. Here, as the turpentine present interferes with the illuminating power of the gas, a light hydro-carbon is introduced from a naphtha reservoir, and the gas thus improved is conveyed to the mills and houses.

Of the quality of the gas I cannot speak definitely, as the only light burning the night of my visit was one in Mr. E, W. Rathbun's residence, and I was informed that certain little mechanical details not being satisfactory, the proper mixture of gases and an exhibition of the illuminating power of the article had to be deferred for a few days. The flame in the light which I saw was, where issuing from the burner, of a beautiful blue color, shading off into the light yellow of the flame above. This light blue color is ascribed to turpentine. and it is said interferes with the illuminating power, but is easily got rid of sufficiently by adding the napthous gas. As it was, however, I do not think that the light was any less brilliant than that of Toronto water gas. The heat thrown out by the flame was very marked. This was claimed as a merit, as the gas could be used to advantage in cooking and heating as well as for illuminating purposes.

It is proposed to light the mills, and in fact the whole town, with this gas early this winter. The charge per 1,000 feet will be the same as that charged by the Belleville Gas Company. The cost of production, the managers estimate to be almost nothing, owing to the fact that sawdust is a superabundant commodity here, and the processes of manufacture up to the time the pyroligneous gas leaves the chemical works are such as must be undergone in order to produce the other chemicals. Theoretically a share of the cost of these main processes is chargeable to the gas ; practically, however, the only expense is in the simple processes of the gas building, and interest on the investment. The chemical works are said to have cost $30,000—some say more. Any kind of sawdust is suitable for gas-making.

Messrs. Walker & French do not think the manufacture of gas from sawdust can be carried on economically except in lumber towns or in cities close to gigantic saw mills, as sawdust is a bulky product which can not be handled as cheaply as coal. To towns favorably situated, however, and to saw mills and to saw mill villages, they expect the invention to be a great boon. Wood gas, they think will pay much better than coal gas under those favorable circumstances, even where it is the only product ; and if combined with works for the manufacture of tar, methyllated alcohol, or acetic acid it would cost very little.

The manufacture of gas and chemicals is not, however, the only use to which sawdust is being applied at Deseronto, It is converted into fuel for shipment. The sawdust under the blows of a steam hammer is compressed into solid and adhesive blocks. The cast-iron moulds are so arranged as to fall into place filled, as rapidly as the hammer rises. The adhesiveness of the sawdust when thus compressed is great. The bulk is remarkably small, 60 pounds of sawdust being required to make a cubic foot of the fuel. It is proposed further to add tar to the sawdust. The fuel, it is thought, may come into extensive use ; and it is barely possible that it may even be used in the manufacture of gas for towns removed a considerable distance from lumber mills.

AITKIN, Minn., is forging ahead as a lumber producing point. A couple of years ago it was but a settlement, and now it claims 1,000 inhabitants, has three saw mills, one planing mill, while the second planing mill and a sash, door and blind factory will go up in the spring. The last accession to the saw mill is that of Messrs. Parker, Hazelton, & Co., the firm being composed of Messrs. G. W. Parker, ex-congressman G. C. Hazelton, and another gentleman named Hazelton, who resides at Boscobel, Wis. The capacity of the mill will be 50,000 feet daily, and the combined capacity of the three mills, 130,000.

THE manufacture of wood-working machinery has developed at a wonderful rate during the past ten years. Where, formerly, the business was mainly confined to a number of large concerns, there are now a great many small establishments engaged in the business. It is safe to say that no line of machinery has made greater strides towards perfection than this, and many of these small establishments will probably ere long develope into wealthy corporations. The manufacture of lumber and its subsequent manipulation, are properly recognized as among the leading industries of the United States.—*Wood-Worker.*

CONCENTRIC RINGS OF TREES.

In the December number (1812) of the *Monthly*, you published an article prepared by me, on the "Annual Growth of Trees," which has been somewhat largely commented upon, in the periodicals and press of the day, as also by the *American Congress of Forestry* at St. Paul, I am glad to note this interest in the subject, as it will cause more accurate observation of the facts in the case. As many of my critics have apparently read only extracts from the article, and have accordingly drawn very incorrect inferences as to my views, I wish to restate some of the more important points, and the evidence sustaining them.

In June of 1871 I planted a quantity of seed as it ripened and fell from some red maple trees. In 1873 I transplanted some of the trees from these seeds, placing them on my city lots in Plattsmouth, Nebraska. In August, 1832, finding them too much crowded, I cut some out, and, the concentric rings being very plain and distinct, I counted them. From the day of planting the seed to the day of cutting the trees was two months over eleven years.

On one more distintly marked (although there was but little difference between them), I counted on one side of the heart 40 rings. Other sides were not so distinct; but in no part were there fewer than thirty-five. There was no guess-work about the age of this tree. A daily record of the meteorological events for the Smithsonian Institution and Signal-Office for over twenty years, and a life long habit of daily record of all important events, had led to much care and caution in such matters. Hence, from my record, I *knew* the tree had but twelve years of growth; and yet, as counted by myself and many others, it had 40 clear concentric rings.

Here permit me to quote a few lines from the original article, which, so far as I have seen, have been entirely ignored or overlooked by all commentators: "I could select twelve more distinct ones (rings) between which fainter and narrower, or sub-rings appeared. Nine of these apparently annual rings on one section were peculiarly distinct; much more than the sub-rings, But, of the remaining, it was difficult to decide which were annual and which were not." When first cut, and while the wood was green and the cells filled with sap, these rings were very clear and plain; but as the water evaporated and the wood contracted, they showed less plainly, I have a section of it now before me, and I cannot make out clearly more than 24, where, when green, forty were clearly visible. This section was not at first so distinctly marked as a section forwarded to Professor Cleveland Abbe, of the Signal-Office, at his request; although that, when forwarded, showed the rings much less conspicuously than when fresh and green.

Mr. P. C. Smith, in the August (1883) *Monthly*, supporting the commonly received reliability of the rings, as an index to the age of the tree, refers to certain disputed corners and lines marked by hacks on trees, and the agreement of the number of the subsequent rings with the record of the surveyor. This indicates an uncertainty in the matter which is hardly receivable as scientific proof. If the record was reliable, why question the hack? If only for confirmatory evidence, how identify the one hack among the many which on old lines invariably accumulate in the vicinity of disputed lines by many resurveys? Is it not a mere assumption that the rings do indicate a like number of years; and that, as the record agreed with these rings, therefore, that hack was *the one*? Mr. Smith says, "It will be very difficult to convince an old surveyor, or an old lawyer, who has tried many of these land cases, that each concentric ring on an oak tree, at least, does not indicate a years growth only of such tree." Well, I am an old surveyor, having followed the business for upward of fifty years, and the evidence before me admits of but the one possible conclusion; and, had Mr. Smith or any other intelligent man the same evidence, I am sure there could be no disagreement between us on the subject.

The Hon. James J. Wilson, of Bethel, Vermont, an "old lawyer" and late Senator in the State Legislature, writes me, under date of August 15th, that at a trial in the District Court at Woodstock, Vermont, on a disputed line based upon a cut in a hemlock tree, a section of the tree embracing the cut was produced in court, and the rings outside the cut counted up from forty to fifty, while those on the opposite side were only nine or ten! The verdict of the court was, that "the rings were not a sure indication of the age of the tree"

Hon. Robert W. Furness, late Governor of Nebraska, so well known as a practical forester, has kindly furnished me with several sections of trees of known age, from which I select the following: A pig hickory eleven years old, with sixteen distinct rings; a green ash eight years old, with eleven very plain rings; A Kentucky coffee tree ten years old, with fourteen very distinct rings, and, in addition to these, twenty-one sub-rings; a burr oak twenty-one years old, with twenty-four equally distinct rings; a black walnut five years old, with twelve rings. Governor Furness adds that he has a chestnut of four years, with seven rings; a peach of eight years, with six rings; and a chestnut oak of twenty-four years, with eighteen rings. He attended the recent meeting of the American Association for the Advancement of Science, at Minneapolis, Minnesota, and presented this question and his specimens to the section on forestry. He reports that Professor Budd, of the Iowa Agricultural College, presented also a specimen spruce from Puget Sound, of known age, or nearly fifteen years old. The section was twelve inches in length, and on one end had eighteen rings and on the other end had only twelve. Commissioner Loring expresses the opinion that "this settled the question, that rings at all times could not be relied upon as an index of the age of trees."

Hon. J. T. Allen, of Ohmaha, superintendent of tree-planting for the Union Pacific Railroad Company, in a recent letter says:—"Any intelligent man, who has given any attention to this matter of yearly tree-growth, knows that the rings are no index of a tree's age. H. P. Child, superintendent of the Kansas City stock-yards, shows me a section of pine eight years old, with nineteen rings, and a soft maple of nearly fourteen years, with sixteen very distinct rings, in addition to which there are forty-seven less distinct sub-rings."

In conclusion, that the more distinct concentric rings of a tree approximate, or in some cases exactly agree, in number with the years of the tree, no one, I presume will deny; but that in most and probably nearly all trees, intermediate rings or sub-rings, generally less conspicuous, yet often more distinct than the annual rings, exist, is equally certain: and I think the foregoing evidence is sufficient to induce those who prefer truth to error to examine the facts of the case.

These sub-rings or additional rings are easily accounted for by sudden and more or less frequent changes of weather and requisite conditions of growth—each check tending to solidify the newly deposited cambrium, or forming layer; and as long intervals occur of extreme drought or cold, or other unfavorable cause, the condensation produces a more pronounced and distinct ring than the annual one. Query: Has a tree grown in a conservatory, or place of unchanged conditions of heat and moisture, any concoutric ring?—*Popular Science Monthly.*

HOW CREOSOTED TIMBER BURNS.

One objection which has been urged against creosoting as a means for preserving timber, in addition to its expensiveness and the difficulty in the way of thorough injection, has been the alleged inflammability of wood treated by the creosoting process. As the creosote is in the form of dead-oil or tar the burning quality of wood impregnated with it would, inferentially, be excellent. Yet it is claimed that in a recent case this theory was substantially demolished by results. An establishment for creosoting piles and planks was burned in New York a few days ago, to which the presence of creosote afforded considerable protection against the fire. The fire is thus described: The building was of pine and spruce in their natural state, except the sills, which were made of creosoted pine. The latter were set on posts and raised about a foot above the ground, so that the flames had a chance to get under them; they were charred, yet retain their form and a certain amount of strength, whereas not a piece of the untreated lumber could be found. Scattered over the premises were numerous creosoted piles and several thousand feet of plank all charred, but the pieces mostly retained their original form and a certain degree of usefullness. Where the flames could reach the comparatively uninjected heart wood, they ate into it, leaving a charred creosoted shell. In all the above charred pieces the fire went out of itself; creosoted wood burns with a dense black smoke, which has a smothering effect.—*Northwestern Lumberman.*

SAWS.

The improvements made in saws constitute one of the most important steps in modern progress. It is now practicable to run circular and band saws with a capacity of 4,000 feet per minute. Circular saws have been run in soft wood with a circumferential velocity of 9,000 feet (nearly two miles) per minute, but the difficulties, says the *Engineering Times*, of any higher rate than that we have indicated as the ordinary maximum are due to heating and trembling, especially if the parts are the least dull and unbalanced. Band saws dodge; they can be made to bear a great number of the moderate flextures required by sufficiently large wheels, and can be guided very successfully at the points of entering and emerging, but no practicable amount of skill can make them saw in absolute planes through thick and knotty wood. Circular saws heat and buckle in working, unless just enough distorted when cold to allow it. Reciprocating saws cannot work with a speed satisfactory for modern progress. The teeth of power saws may hook, and draw the wood indefinitely. Hand saws cannot be shaped for unless the cut is gauged they will take hold too rank.

The saws made by three layers, each side cast steel and the inner layer tough iron, are very serviceable. For woods of a woolly fibre, such as poplar, the teeth of the saw should be of coarse space and set, to effect a clearance and overcome its clearing properties. For cutting the harder and close-grained woods, such as oak, beech, etc., the saw should be increased one gauge, the teeth should be more upright and spaced finer, and the set also should be reduced. A cross-cut saw must be sharpened with reference to the wood, whether hard or soft. If not properly set, it is evident it will take increased power to drive it. For sharpening cross-cut saws for hard wood the file should be at an angle of 45 degrees; for medium wood at an angle of 35 degrees, and for soft wood at 12½ degrees. So much for position. There is no difference in the angle of a small or large file; difference of action in working depends on the fine or coarse cut of the file. We prefer for the purpose of sharpening a good sized file, not less than four and a half or five inches, if it is cut equally fine and sharp on the corners. The cutting angles and the tops and faces of the teeth should be beveled exactly alike, and the gullets also should be of even depth, the saw working freer and with less power if the teeth are allowed to get short and stumpy. In clamping a saw for sharpening, the jaws of the vice should be covered with sheet lead, about one-quarter inch thick. If not so covered, the saw will vibrate in sharpening, and most probably strip the file.

In setting saws with a hammer, the best plan is to fit the saw horizontally on a stud fitted in a wooden frame having a transverse movement. A small steel anvil with a beveled face should be placed at one end of the frame, and the saw traversed backward or forward for the teeth to overlap the anvil centre the distance of the set required. A series of short, sharp blows should be given to the hammer in preference to a heavy one.

For setting saws, several different machines have been patented by which the teeth may be set to a uniform level, one of which is made in the form of pliers.

The object of setting saws is to lessen friction. The reason of greater power being requisite for cross-cutting than for ripping is that the former is not parallel to the grain. In filing, the edges are, of course, beveled opposite ways. The sharp beveled edge will be outward on the side to which the tooth is bent.

In sawing a large amount of lumber, the thickness of the saw, as affecting the saving of wood, is a matter of consideration; the thinner the saw, too, the less is the power required to drive it. An objection, however, against thin saws, worked in tension is, that from their pliability the cuts are apt to diverge from a straight line. On the other hand, with a thick saw-blade, the thrust tends to bend it, whilst the pull on the thin saw straightens the blade. The thin blade in tension must be considered as preferable for hand and machine frame saws as well as band saws.

In scroll bands, the thickness and narrowness of the band permit the saw to cut out corners, and segments of circles of extremely sharp curvature.

In hand saws the teeth and blades are solid,

A great improvement in the circular saw is the application of inserted teeth, this allowing of ready renewal in case of any being broken, and that, through renewals, the diameter of the saw is not permanently reduced by the process of sharpening.

In the use of saws, care must be taken that the teeth are on the same general level; if the opposite be the case, proper action of all the teeth cannot be secured, they will become more readily blunted, and through the longer teeth being drawn more deeply into the timber than the others, they will be apt to be broken off; power, too, will be lost in driving the saw.—*Cotton, Wool and Iron.*

THE CREOSOTING OF TIMBER.

As is well known, the preservative properties of creosote are owing to its preventing the absorption of the atmosphere in any form, or under any change of temperature. It is noxious to animal or vegetable life; and it arrests all fermentation of the sap, which is one of the primary causes of dry rot and species of decay in timber. The action of creosote—says Mr. Bale, in his work on "Saw Mills—Their Arrangement and Management"—may be thus described: When injected into a piece of wood, the creosote coagulates the albumen, thus preventing any putrefactive decomposition; and the bituminous oils enter the whole of the capillary tubes, incasing the woody fibre as with a shield and closing up the whole of the pores, so as to entirely exclude both moisture (water) and air. By using crosote, inferior porous timber and that cut at the wrong season, and therefore sappy, may be rendered durable. The Bethell system of creosoting is as follows: The timber is first thoroughly seasoned and cut to the required dimensions. It is then placed in a wrought iron cylinder, fitted with doors that can be hermetically closed by means of wrought iron clamps. The air and moisture contained in the wood are then exhausted from it, and from the cylinder, by means of a powerful air pump. The pores of the wood being now empty, the preservative material (creosote oil) is admitted into the tank. When the wood has received all that it will after this manner, more oil is forced into it by means of hydrostatic pumps, exerting a pressure of 120 pounds to 200 pounds per square inch. This pressure is maintained until it appears that the proper quantity of creosote oil has been absorbed by the wood, which is determined by a gauge. Timber intended for railway sleepers, bridges, etc., should absorb 7 pounds of oil per cubic foot: and timber required to be protected against marine insects, etc., requires at least ten pounds of oil per cubic foot. The cost varies from 4d. to 5d, per cubic foot, according to the quantity of oil required.

On Thirty Days Trial.

The Voltaic Belt Co., Marshall, Mich., will send Dr. Dye's Celebrated Electro-Voltaic Belts and Electric Appliances on trial for thirty days to men (young or old) who are afflicted with nervous debility, lost vitality and kindred troubles, guaranteeing speedy and complete restoration of health and manly vigor. Address as above.—N.B.—No risk is incurred, as thirty days' trial is allowed.

BE CAREFUL WHAT YOU EAT—The best medical authorities declare that worms in the human system are often induced by eating too freely of uncooked fruit and too much meat, cheese, etc. Whatever may be the cause, Freeman's Worm Powders are speedy and safe to cure; they destroy the worms, and contain their own cathartic to expel them.

A TREELESS COUNTRY.

"I had a dream which was not all a dream?"
A great State was a desert, and the land
Lay bare and lifeless under sun and storm,
Treeless and shelterless. Spring came and went,
And came, but brought no joy; but in its stead
The desolation of the ravening floods
That leaped like wolves or wildcats from the hills
And spread destruction over fruitful farms,
Devouring as they went the works of man,
And sweeping southward nature's kindly soil
To choke the watercourses, worse than waste.

The forest trees that in the olden time—
The people's glory and the poet's pride—
Tempered the air and guarded well the earth,
And under spreading boughs for ages kept
Great reservoirs to hold the snow and rain,
From which the moisture through the teeming year
Flowed equally but freely—all were gone,
Their priceless boles exchanged for petty cash,
The cash had melted and had left no sign;
The logger and the lumberman were dead;
The axe had rusted out for lack of use;
But all the endless evil they had done
Was manifested upon the desert wasts.

Dead springs no longer sparkled in the sun;
Lost and forgetten brooks no longer laughed;
Deserted mills mourned all their moveless wheels;
The snow no longer covered as with wool
Mountain and plain, but buried starving flocks
In artic drifts; in rivers and canals
The vessels rotted idly on the mud
Until the spring floods buried all their bones,
Great cities that had thriven wondrously,
Before the source of thrift was swept away,
Faded and perished, as a plant will dis
With water banished from its roots and leaves;
And men sat starving in the treeless waste,
Besides their fruitless farms and empty marts,
And wondered at the ways of Providence!

—*N. Y. Sun.*

WOODS IN SURGERY.

Wood is being employed scientifically in surgery in a different form from ordinary splints. A foreigner has introduced wood-wool as a cheap and useful dressing for wounds, and it is being prepared extensively as a commercial staple for surgical dressings. It is finely-ground wood, such as is extensively used in the manufacture of paper. It is a clean-looking, delicate-fibered, soft, yellowish white substance, having an odor of fresh wood, and absorbs an immense quantity of liquid. The best wood-wool was found to be that which was obtained from the *pinus picea*. The wood-wool thus procured was first pressed, passed through a sieve, then dried and impregnated with a solution containing ½ per cent. of sublimate and 10 per cent. of glycerine. The advantages claimed for this dressing are numerous. It is cleanly, fresh, and of a whitish color; it is at the same time soft and delicate in texture as cotton, and "extraordinarily cheap,' The actual price is, however, not stated. It possesses some antiseptic properties naturally, has an agreeable odor, and is exceedingly elastic even in thin layers, so that bandages can be put on more lightly with this than with any other dressing. Its absorbent properties are so high that it takes up 12 times its own weight of water, so that 10 ounces of well-dried wood-wool after complete saturation attain a weight of 120 ounces.

EFFECT OF A HURRICANE.

A party of hunters who returned to Chatham last night brought very startling reports of the damage wrought by the recent gale in the forests in Chatham, this town, and in towns over the border in Maine. They saw tens of thousands of acres of valuable forest trees wholly destroyed. All of the old and a good deal of the new is practically destroyed. Where the timber is not broken it is so torn and matted in the debris as to be at least worthless. In many instances the homes of woodchoppers have been ruined and much suffering among them will ensue this winter. In confirmation of the above, J. E. Clay, representative to the legislature from Chatham and probably the largest owner of timber land in New England, telegraphs as follows: "Explorers just come in report that the havoc and destruction by the late hurricane are far worse than we had expected. The loss in Chatham alone will reach 100,000. It will take a century to fully restore our forests. The loss falls very seriously on the owners of woodlands, while the lumber business will be crippled for years."—*Chicago Herald.*

THE PROSPECTS.

The season of lumber manufacturing is rapidly closing, and probably but few of the mills will be in operation after this week, There is nothing doing in the market, says Quiz of the Saginaw *Courier*, and there is considerable uncertainty as to the future of prices for the coarser grades, in view of the action that tariff agitators in congress threaten. Fully one-half of the Michigan members manifest a disposition to crush the lumber industry of the state by unwise legislation. Coarse lumber, at present prices, and a dull market, cannot be manufactured so as to leave a reasonable profit upon the capital invested, and if prices should be reduced a couple of dollars per M. feet, the coarse grades will be left to rot and burn up in the woods, hundreds of men will be forced to seek employment elsewhere, and the production will be confined to the best grades. Should there be no agitation tending to unsettle values, it is believed there will be a good winter trade, and manufacturers enabled to work off coarse stocks now piled upon the docks, inasmuch as the impression exists that the winter will be open and mild, in which event building operations will be carried on upon a scale more extensive than usual. The stocks in the Chicago yards are estimated to be 100,000,000 feet less than at this date last season, and a comparatively small proportion of it is dry. Trade at the east is reported good for the season. There is nothing worth relating doing in shingles in the valley. In the woods the weather continues favorable for cutting and skidding, but reports indicate that operators are not crowding matters. —*Lumberman's Gazette*

The Best Time to Cut Timber.

A correspondent of an Eastern journal says: "For strength, beauty and durability, I have found August, September and October the best and Feburary, March and April the worst months to cut wood. A red maple, cut in September, will keep in a round log perfectly white and sound until the next August; while one cut in March will begin to blacken and decay by the middle or last of June. This is not copied from any scientific work, but is what I have found to be a fact by many practical tests. Gray birch cut in September will keep in a good condition until the next September if left in the woods cut in four-foot lengths; while if cut in March and left in the same way it will be nearly worthless by the first of August, at least such is the result on my land. White pine like red maple, keeps white much longer if cut in September than if cut in March, and is not injured by the worms as much. I have found that wood dried slowly in a low, cool place is better than dried quickly in the hot sun, even though cut in summer. May this not in a measure account for wood being better cut in autumn, it having the long cold winter to dry in?

Advice to Mothers.

Are you disturbed at night and broken of your rest by a sick child suffering and crying with pain of cutting teeth? If so, send at once and get a bottle of Mrs. Winslow's Soothing Syrup For Children Teething. Its value is incalculable. It will relieve the poor little sufferer immediately. Depend upon it, mothers, there is no mistake about it. I cures dysentry and diarrhoea, regulates the stomach and bowels, cures wind colic, softens the gums, reduces inflammation, and gives tone and energy to the whole system. Mrs. Winslow's Soothing Syrup for Children Teething is pleasant to the taste, and is the prescription of one of the oldest and best female physicians and nurses in the United States, and is for sale by all druggists throughout the world. Price 25 cents a bottle.

If you are troubled with a "hacking cough," Down's Elixir will give you relief at once. Warranted as recommended, or money refunded. Price 25c, 50c, and $1.00 per bottle.

How to Treat Weak Lungs--Always breathe through the nose, keeping the mouth closed as much as possible. Walk and sit erect, exercise in the open air, keep the skin scrupulously clean, and take Hagyard's Pectoral Balsam for coughs, colds, and bronchial troubles.

The Best Proof.—The Globe.—"I sell more Burdock Blood Bitters than I do any other preparation in stock," says B. Jackes, druggists Toronto. If the reader will ask any druggist in the city he will get a similar answer to his query—a proof that it is the most popular medicine for the blood, liver and kidneys known.

Railway Ties for France.

The *Minerve*, which speaks of the scarcity of timber in France being so great that iron is coming into use for railway ties, adds: "But if timber is scarce in France, it is not so in Canada. As far as wooden railway ties are concerned we are able to supply the whole of Europe. In fact, some of our business men have already had this point under consideration in so far as France is concerned."

United States Minister Foote says that Corea, Asia, is fairly wooded, and the government exercises much care in maintaining the forests. In the north there are large forests of timber.

For a hard cold, with pain in the head, bones or through the chest, take Down's Elixir at once and in liberal doses, cover up well in bed, and our word for it, you will soon be well.

A Paralytic Stroke—W. H. Howard, of Geneva, N.Y., suffered with palsy and general debility, and spent a small fortune in advertised remedies, without avail, until he tried Burdock Blood Bitters. It purified and revitalized the blood, caused it to circulate freely, and quickly restored him to health.

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Shingles, Doors, Sash, Flooring, &c.,
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Building & Bridge Timber Sawn to Order.
Pine, Spruce and Hemlock Lumber by the Cargo.
Steam Saw Mills, Box Factory and Yards.—342 to 390 William St., and 130 St. Constant St., Montreal.
Steam Saw Mills, L'Assomption, P.Q.
P. O. Box 804. 1yL21

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EPPS'S COCOA
BREAKFAST.

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctor's bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*

Made simply with boiling water or milk. Sold in tins only (½-lb. and lb.) by Grocers, labelled thus:
JAMES EPPS & Co., Homœopathic Chemists,
1yl21 London, England.

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English Extract of
BUCHU,
One of the Best
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INVESTIGATORS IN USE.

It is a specific in the cure of all diseases of the Kidneys, Bladder, Prostatic Portion of the Urinary Organs, Irritation of the Neck of the Bladder, Burning Urine, Gleet, Gonorrhea in all its stages, Mucous Discharges, Congestion of the Kidneys, Brick-dust Deposit, Diabetes, Inflammation of the Kidneys and Bladder, Dropsy of the Kidneys, Acid Urine, Bloody Urine, Pain in the Region of the Bladder, PAIN IN THE BACK, Urinary Calculus, Renal Calculus, Renal Colic, Retention of Urine, Frequent Urination, Gravel in all its forms, Inability to retain the Water, particularly in persons advanced in life. IT IS A KIDNEY INVESTIGATOR that restores the Urine to its natural color, removes the acid and burning, and the effect of the excessive use of intoxicating drink.

PRICE, $1; or, Six Bottles for $5.
Send for Circular. Sold by all Druggists.
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Wholesale and Retail Dealer in
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Manufacturers of every Description of
Saw and Grist Mill Machinery,
Water Wheels, Steam Engines, Derricks, Boilers, Steam Pumps, Mining Machinery
20L REPAIRS PROMPTLY EXECUTED. 1y
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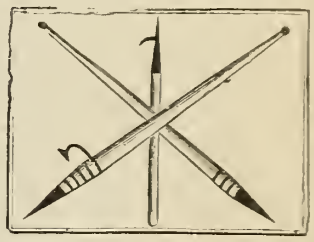

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Lumberman's Tools, etc.,
HIGHEST AWARDS IN CANADA and U.S.
L20-1y CHAUDIERE, OTTAWA.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed sent free. Address Stinson & Co., Portland, Maine.

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WEEKLY MAIL
Stands far in advance of any other Canadian Paper.
$1 a year
It has the Largest Circulation; the Latest News, both Local and Foreign. A Splendid Story Page. First-class Agricultural Page. Reliable Market Reports. Legal Column Household Department, Children's Department, etc.
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Toronto, - Canada.

TRADE NEWSPAPERS.

There is now and then a person so stupid as to believe that advertisements in trade newspapers are not generally read, and that money expended in advertising this way is practically wasted. Then there is another class who, if a map, or poster is presented to them, will readily give their advertisement to help form a frame around the same. Also when the directory man comes around, they must have a card at the top of the page, or perhaps a full-page advertisement, and they are willing to pay a big price for this class of advertising. What good does it do him? None whatever, for it is not seen, and does not reach the class they desire.

Now a good trade journal, published directly in their interest, goes directly to the class of trade they wish to influence.

If a hundred men of polite address, of fluent speech and ready wit, were to call, weekly or monthly, each upon a hundred others and get the attention of each long enough to say John Smith has made a great improvement in such and such a machine, or that Jones, or Brown, at such a place, have a complete and full line of wood-working machinery, we will readily concede that the services of these one hundred men would be of great service to Smith and Jones, and great advantage to the party to whom the statement was made. The hundred men could not be employed to go from place to place—some small and distant places—and make this statement to five or ten thousand people at less than a cost of several thousand dollars each trip. All this is done by the trade newspaper at the cost of a few hundreds at the most, and the visits are made weekly or monthly as the case may be. The messenger who travels, addresses himself to to the ear, and takes the party addressed when he may have his thoughts absorbed in business or other matters; but the trade newspaper reaches the party sought through the eye, when the reader has his thoughts solely fixed on the paper before him. But those who affect to believe that there is little use in advertising urge, as an objection, that advertisements are not read. They can easily be convinced of their error in this repect by making inquiry. Let them insert an advertisement offering to purchase some article that is tolerable plenty in the market, and they will be flooded with offers to sell before the ink of the advertisement is dry. An enterprising trade newspaper, with an extensive circulation, is in a position to do the advertiser great good. In in its sphere, the trade newspaper is worth a dozen New York *Heralds* or *Tribunes*, with their circulation of hundreds of thousands, to an advertiser in whose interest the trade journal is published. A man's sign offers a mute invitation to those only who pass his place of business; his circulars can only reach those to whom particular attention is given; but his advertisement, in a trade newspaper, goes into the highways and byways, finding customers and compelling them to consider his argument.

Advertisers sometimes say "Well, I cannot afford a large advertisement, and a small one won't do me any good," Now, our advice is: Don't be afraid to have a small advertisement by the side of a large competing one. The big one can't eat it up.—*Journal of Progress.*

A QUESTION OF FUTURE COMPETITION.

The owner of an immense quantity of standing pine in Michigan is naturally interested in the effect the opening of the Northern Pacific and Canadian Pacific roads will have on the value of white pine. He propounds the question in the following terms:

"It is yet to be seen and experienced what effect the completion of the Northern Pacific and Canadian Pacific railroads will eventually have as tending to lessen the value of Michigan Wisconsin and Minnesota pine lumber; as those roads may meet us on the western prairies, and largely furnish them the lumber they require, thereby mostly excluding our pine, thus largely curtailing the area for the sale and consumption of Michigan and Wisconsin lumber. For some time past this question has met me square in the face, as an element to be considered in my purchases and sales of pine lands. Perhaps you, with your eye over the whole business horizon, can give me some light on this subject.

Without a doubt the lumber of western Washington Territory and Oregon, as well as that of the mountain regions of upper Idaho and Montana, will seek a market, to some extent this side of the mountains in Dakota, and possibly as far south as Nebraska. But this is to be said about the probability: It will be several years to come before the Northern Pacific road has a competitor in the lumber traffic from Puget Sound or the Pend d'Oreille sources of supply eastward. Until there are rival lines it need not be feared that the lumber trade of the northwest will be greatly broken into by western manufacturers. The one line cannot attend to the amount of traffic necessary to do that. Besides, if our querist will refer to back numbers of the *Lumberman*, even so recently as Nov. 10, he will see that there is an organization called the Montana Improvement Company, that has a close relation with the Northern Pacific road, and that this company will virtually control the lumber business along that line from the Dalles, in Oregon, to the eastern limit of Montana, and probably further eastward in Dakota. The traffic that this company is likely to put on the road will be all that the Northern Pacific management will want to handle, in the direction of lumber, for years to come. The Puget Sound branch of the Northern Pacific is not yet completed, and when it is the treeless grain region of Eastern Washington will need all the Puget Sound lumber that does not go by sea, for years to come. We must reflect that Washington and Oregon territories are empires within themselves, that their eastern portions are without forests, and present a vast area of good wheat and grazing land, that is bound to be settled. It will keep the eastern Washington and Oregon mills busy for years to supply this demand alone. Then there is middle and southern Idaho to be supplied from either the Pacific side, or the mountains in the northern part of the territory. It is not possible that the territory tributary to the Pacific coast supply will be so filled up with lumber within the next ten or fifteen years that manufacturers will seek a market east of the mountains.

As to the Canadian Pacific road, there is nothing to be feared from that quarter, because the Bow River region, under the Rocky Mountains, has to be reached before manufacture begins, and the prairies to the eastward, hundreds of miles in extent, must be supplied before the output will seek a market across the border, in Dakota. There is, in fact, more danger from Lake Winnipeg pine and spruce than from western lumber, from the Canadian Pacific road. But it will be a cold day when the northern Wisconsin or the northern Minnesota Lumbermen allow either the Canadian or the Pacific coast lumber to get away with the demand in Dakota, Wyoming, Nebraska or Colorado.

When we consider the eastern side of the question we must certainly conclude that there is no danger of white pine being driven out of the western field by Pacific coast or Rocky Mountain lumber. A single factor would prevent such a thing, and that is transportation. The railroad lines out of northern Wisconsin to the westward have been, and are being, constructed with a special reference to the lumber traffic. Be sure that no Pacific coast lumber will be allowed to come this side the mountains on a competitive freight rate. The Omaha "lumber line" and other railroad lines will see to that matter. The roads were built partly, or largely, to carry the white pine of Wisconsin westward, and they will do it. As for Michigan pine, the time is right here, when all that is better than common, and much of the remainder, will be wanted east of the Mississippi river. Michigan lumber will not much longer have to compete for trans-Mississippi trade. This may be considered a "too previous" proposition, but it is the most prominent feature of the near future pine problem, and one that will upset much of the calculation that pine men are now making. Men of affairs are prone to miscalculate the future. They are much given to "hindsight," and regard the forecasting of the future as visionary and useless. The lumbermen of the country are fond of recounting the marvelous changes that have taken place in the pine business within the past twenty years, but shut their eyes to the twenty that are to come. Even now selects and clears are sought after throughout Wisconsin, and even as far away as Duluth. The day is near when Chicago will absorb much of the Chippewa valley, Wis., pine that now goes westward, and the woods of north Minnesota will before long contribute to the supply of good lumber in this market. Instead of the lumber of the Pacific coast meeting white pine on the prairies and thus reducing the value of eastern lumber, there will come a time when Michigan and Wisconsin can withdraw from the trans-Missouri territory entirely, and let the Pacific long-haulers have it and welcome.—*Northwestern Lumberman.*

LUMBER SUPPLY AND ITS EXHAUSTION.

On this subject the Bay City *Lumberman's Gazette* has the following:—The opinion of men and newspapers, even those supposed to be posted on the question of the exhaustion of our timber supply, are as wide apart as the east is from the west. Some are inclined to take the government reports as conclusive, and rely wholly thereon, while others deem them completely and utterly worthless, so far as statistical authority is concerned. One writer furnishes figures to prove that a single decade is the utmost limit of the lumber business in this country if carried on as extensively as at present, unless an extensive system of arboriculture is at once inaugurated to replace the timber which is under a system of such rapid exhaustion; while others furnish figures to establish the fact that Texas alone has sufficient forest timber to satisfy the demands of the entire country for at least a century, to say nothing of the redwood forests of California, which it is again claimed have sufficient timber in a single county to prevent a timber famine until the present generation shall have passed off the stage of human activity. This subject is one which is of interest not to lumbermen alone, but to the entire population of this country and Europe. The diversified views of our contemporaries are almost as thick as the autumn leaves of the forests to which they refer, and are put forth, one is sometimes inclined to think, with about as much lack of actual fact as do the leaves of the forests lack some settled purpose in their flutterings in the wind. In order that our readers may have some idea of the diversity or divergence of opinions on the subject, we will publish the following from the Minneapolis *Tribune*. It may prove interesting to our readers, not only because of the existing difference of opinion between Major Camp and the *Tribune* itself, but because of some other suggestions which are thrown out by the former:

"The question of future timber supply is one in which not only the northwest but the entire country, is virtually interested, and during the last quarter of a century it has been at frequent intervals discussed in all its bearings, but a yet without any satisfactory solution. That the supply of pine timber in the northwest will, at the present rate of consumption, be soon exhausted, is a fact which all conversant with the situation now admit, but just how soon the end will be reached is a point upon which experts do not wholly agree. The *Tribune* this morning gives the result of several interviews with local authorities. Major Geo. A Camp, who is probably as well informed on the subject of timber supply of the upper Mississippi as any man in Minnesota, estimates the available supply in the country tributary to Minneapolis of five and a half billion feet, and thinks twenty years will see it practically exhausted. In this connection Major Camp makes the interesting and not unreasonable prediction that before the period of exhaustion shall have arrived the manufacture of paper lumber will have reached a degree of perfection which shall permit of its use for all inside finishing work in the construction of buildings, and that for heavy and outside work we shall be compelled, as all long settled countries have been, to resort to brick, stone and iron—the first two of which materials, at least, are inexhaustible and reasonably inexpensive.

There is one source of supply—and the *Tribune* looks upon it as a very important one to this section—which Mr. Camp has left entirely out of his calculations. We refer to the great timber preserve of the North Pacific coast, which is opened up to us by the construction of the Northern Pacific railway. The extent of this supply is difficult to estimate, but it is probably safe to assume that it would, if properly guarded, furnish the entire half of the United States with manufactured lumber for one hundred years after the supply elsewhere is exhausted. There are other facts which are sufficient of themselves to allay any tendency to panic during the next quarter of a century. The southern states have a timber supply which their own moderate demands in a mild climate would not consume in 500 years. This is already being made available for northern uses. Again, it is to be remembered that there is no such thing as an entire exhaustion of merchantable timber in any timbered section. Whenever the lumber supply in this northwest begins to approach extinction, prices will go up and consumption through the employment of other and lower grades and species of timber; pine will give place to less valuable varieties, and the change from the present flush times in choice building material will be gradual, and not abrupt. Just how much importance is to be attached to the growing of timber is yet a question, and in any case a question in which future generations, and not the present will be mainly interested.

SOUTHERN PINE.

The Chicago *Northwestern Lumberman* says: A writer to a newspaper over in Michigan deprecates the southern pine boom on account of the immense quantity of it abounding in seven states, and predicts that the supply will last a century. He alleges that the men who have bought southern pine lands expecting to realize an advance on them while they are yet alive, have made a mistake. Perhaps they have counted on realizing too quickly, but the *Lumberman* cannot regard it as much of a mistake when a man buys southern pine land at a "bit" to 50 cents an acre. The man who thinks he knows all about the future had better not talk about centuries in this swift age of the world. He should remember that this nation is but a little over a century old, and not only has a large part of twenty states been denuded of timber, for agricultural purposes, but the end of the northern pine supply is seen in the dim distance. He should also reflect that only about forty years have elapsed since Michigan pine began to be slaughtered, and the country was for years afterwards but sparsely settled west of the lakes. He should besides have foresight enough to see that this country, taken as a whole, will use vastly and increasingly more lumber in the future than it has in the past—a fact that prognosticators about the lumber supply usually take into the account. That is to say the country will demand increasingly more as long as the supply holds out, and is reasonably cheap. The new iron and the tile age has not put in an appearance yet, and will not while our forests last. Where one thousand feet of white or yellow pine is now used two will be needed twenty-five years from now. This all-knowing man of whom we speak, should reflect on the large amount of yellow pine that is now going to the eastern seaboard and England, and the large increase of the trade northwestward. As white pine diminishes the demand for the yellow variety will increase without a calculable limit.

LOGGING ROADS.

The handling of logs by rail has greatly increased through the northern lumber regions, and particularly in Michigan. The number of private roads which enable timber owners to get their logs to water-ways is in itself large, and in addition to this are several main lines, with innumerable spurs, which traverse regions which afford an almost exclusively log traffic. The business of these roads is immense, as is shown by the following record of logs hauled in 1882: The Flint & Pere Marquette road, 95,294,620 feet; the Michigan Central, 60,000,000 feet; the Saginaw Bay & Northwestern, 86,039,768 feet; the Tawas & Bay County road, 38,486,570 feet. Total, 279,825,953 feet. These logs were hauled to terminal points, and are not counted

among those which went into streams and through booms. The log traffic of the Flint & Pere Marquette road has much increased this season, which is an important reason why the generally prevailing low water has not resulted more seriously to the interests of lumber manufacture. During the month of October the road last mentioned hauled 11,581,000 feet of logs, of which amount 9,582,369 went to Saginaw, as compared with 5,114,951 feet for the same month last year, of which 2,294,900 feet went to Saginaw. The general increase in the movement of logs over this line is shown by the following statement, given for the past two years, up to November 1:

	1882.	1883.
January	12,267,900	16,468,744
February	8,851,620	11,246,888
March	11,147,610	16,504,470
April	11,266,675	17,194,461
May	11,135,638	21,580,221
June	8,003,758	15,954,202
July	3,210,838	5,490,627
August	3,733,256	6,541,454
September	4,243,201	4,454,442
October	5,114,951	21,581,002
Total feet	78,975,447	127,016,511

These figures show an excess for 10 months of this year over correspondiug period last year, of 31,721,890 feet.—*Northwestern Lumberman.*

Good Advice.

Canada should take a prominent part in the forestry exhibition which is to be held in Edinburgh. Edinburgh was fixed upon because it was a sort of half-way meeting ground for the Scandanavian and Canadian lumbermen. Only one local government has so far taken action, that of New Brunswick, which has decided to have its timber wealth exhibited. It might be well, perhaps, for each of the Provinces to take the matter up, as timber matters come within their province, and not within that of the Dominion. At the same time, the Dominion Government should also take action, as it possesses control of immense timber tracts in territories disputed and undisputed, and a better display, as a whole, could probably be made if the Dominion Government undertook a supervision of the whole, and the Local Governments submitted to it.—*Brantford Courier.*

Cement for Leather Belting.

An ordinary cement for leather belting is wheat flour boiled in oil of turpentine; but the ends must be secured by rivets, or it is not reliable. A better cement is made by soaking six ounces best glue in one pint of ale, then boil, add one and a half ounces of boiled linseed oil, and stir well. Another prescription is to take dissolved glue in the form as the cabinet makers use it, and add tannic acid till creamy and ropy. Make the leather surfaces to be united rough, apply the cement hot, let it cool and dry under pressure and it will not need riveting. For rubbing belting, take pure rubber in thin slices, two ounces, dissolve in one pound bisulphide of carbon; this a good cement, but if kept, thickens very soon. In order to prevent this add a solution of pure rubber, resin and turpentine.—*Age of Steel.*

Durability of Timber.

Beneath the foundation of Savoy Place, London, oak, elm, beech, and chestnut piles and planks were found in a state of perfect preservation, after having been there for 650 years. While taking down the old walls of Tunbridge Castle, Kent, there was found in the middle of a thick stone wall a timber curve, which had been enclosed for 700 years. Some timber of an old bridge was discovered while digging for the foundations of a house at Ditton Park, Windsor, which ancient records incline us to believe were placed there prior to the year 1396. The durability of timber out of ground is even greater still. The roof of the basilica of St. Paul's at Rome, was framed in the year 818; and now, after more than a thousand years, it is still sound, and the original cypresswood doors of the same building had been in use more than 600 years.

AN AFFLICTED CLERGYMAN.—The Rev. Wm. Stout, an English clergyman, of Wiarton, was for 23 years a terrible sufferer, with Scrofulous Abscess, which the best medical skill failed to cure. The internal and external use of Burdock Blood Bitters cured him, and for nearly three years he remained hale and hearty.

Desoronto Gas Works Burned.

Early on Thursday morning the inhabitants of Desoronto were startled by the cry of "fire!" when it was discovered that the Gas works were being rapidly destroyed by fire, without a chance of saving them. It is about three years since the Messrs. Rathbun began the experiment of manufacturing gas from sawdust, by a patent process of their own. The experiment was partially successfully at first, as the illuminating power was not satisfactory; but after three year's experimenting and an outlay of a large sum of money, they had gradually increased the illuminating power until the gas works had proved a success. The night before the fire, the village had been lit very satisfactorily. The fire is supposed to have started near the boilers, and could not be subdued. The entire works, except the gasometer, were destroyed, entailing a loss of $30,000. It is believed that the works will be at once rebuilt. The loss is stated at $10,000 to $12,000; insured for $6,000.—*Intelligencer.*

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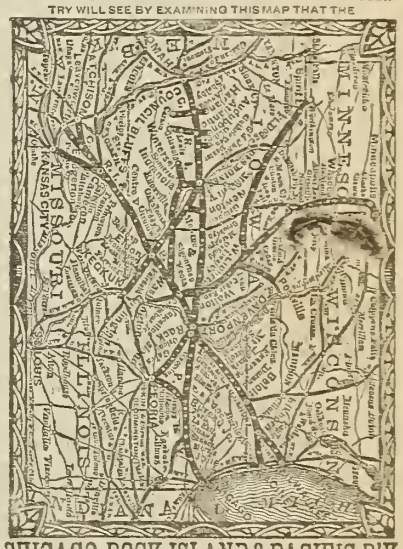
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THE CANADA LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

The CANADA LUMBERMAN is filed at the Offices of MESSRS. SAMUEL DEACON & Co., 154 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

PETERBOROUGH, Ont., DEC. 15, 1883.

A NEW shingle mill is to be put into Hargrave's mill, South Bay City, Mich., that will have a capacity of from 100,000 to 125,000 shingles per day.

THE Belleville *Intelligencer* says :—The Rathbun Company have secured the contract for three more station buildings on the Ontario and Quebec Railway, making ten in all.

A MAN in Oshkosh, Wisconsin, while sawing wood, a local report says, found in a hole in one of the sticks, five ten dollar gold pieces and two twenty dollar pieces, besides some small coins.

THE Winnipeg *Commercial* of Nov. 27, says : Business has fallen off considerably during the past week or ten days, and will in all probability continue quiet during the balance of the winter season.

HENRY DISSTON & SONS recently sold through the Chicago branch house a bill of saws for two complete circular mills, to go to Bolivia in South America. The shipment was quite recently made from the Philadelphia house, and it is estimated that it will take the goods something like eight months to reach their destination.

IT is stated that Prussia has the most complete system of state forestry in the world. In this branch of state servico she has several thousand officials and notwithstanding the cost for maintenace of this large staff, the revenue accruing from tho sale of timber not only meets all expenses, but returns annually a large revenue to the state.

FURNITURE in bedrooms should be as light in construction as is consistent with the strength required, and made of light wood. Ash furniture, oak, and satin wood are very suitable. Whenever possible it is much to be desired on the score of health, that furniture should always be made in such a manner as to be easily moved. It might well be raised clear of the floor, so as to avoid anything like dust traps.

IN England thin shavings of veneers of different kinds of wood are coming into use for book covers. The woods now mostly in use are our American black walnut, lime, oak, holly, etc., but all woods may be used. After being placed upon the wood the veneers can be either rubbed down with oil or French polished.

President Arthur in his annual address refers to the necessity of protecting the forests situated upon the public domain, and suggests that, as the northern portion between the United States between the Blackfeet and Flathead reservations is unsuitable for setttement, it be withdrawn from sale and converted into forest preserve.

A PROCESS of impregnating wood for its preservation has been patented in Germany. This consists in first treating the wood with a solution of zinc vitriol, and then with a solution of chloride of calcium, so that the preservative coating is formed upon the wood by the chemical action of both substances on one another.

THE *Northwestern Lumberman* says :—On the farm of J. E. Baker, of Naples, Me., is a large and dense growth of tall pines. About 40 years ago the spot where they grow was being mowed and yielded a good crop of hay. A few acres of these pincs are quite high, but they are too thick to grow very large. Five years ago a tree was cut out of which a 27 foot sill was made which squared seven inches. There wero numerous trees as large as that one.

COTTONWOOD, it is said, will make four rails in seven to nine years, and maple the same in from eight to to ten years. Cottonwood, soft maple and California redwood are regarded by many as the best trees for forest planting when quickness of growth is dosired, and also when shelter belts around orchards, gardens, barns and stock yards are necessary. Many farmers have learned from sad experience that by cutting down their forests indiscriminately they have made the way clear for chilling, biting winds and frosts to nip their growing fruit.

THE Bay City *Lumberman's Gazette* says :—The year 1883 has been exceptionally disastrous in the matter of fires in wood-working establishments. For the first ten months of the year over one hundred million dollars was wiped out out, went up in smoke as it were, and the necessity becomes app--ent for every precaution on the part of owners to prevent the continuance of such enormous destruction. One hundred million dollars in ten months is too great a business calamity to be longer endured. The most prefect precautionary measures should be adopted by every wood-working establishment in the country.

A FRENCH journal tells of two exactly similar pieces of land, one cleared and the other wooded, where the wooded piece yielded ten times as much water as the open. The latter had an irregular flow, while the woodland yielded an even, regular supply, Another fact is given relating to America. A stream which for years and years, without failing, had supplied soveral mills with power, finally gave out. It not only failed to fill the ponds, but actually dried up. An investigation showed that the woods through which it flowed had been cut down. Subsequently these woods were allowed to grow up again, and for the past ten years, in spite of droughts and other troubles, the stream has flowed without interruption.

MANITOBA FORESTRY ASSOCIATION.

The Winnipeg *Times* of Dec. 4, says :—A meeting of the Manitoba Forestry and Aboricultural Society was held at the Department of the Agricultural offices yesterday afternoon. Present : Mr. Acton Burrows, second vice-president in the chair ; C. N. Bell, secretary-treasurer ; W. B. Hall, of Headingly, and R. R. Keith, Mr. Wagner, M. P. P., of Ossowa, who is making extensive experiments in tree growing, was present as a guest.

Mr. W. B. Hall reported that the special committee had held one meeting and that its members were now engaged in preparing lists of the trees aud fruit indigenous to Manitoba. They had also, through the press, asked for correspondence from persons engaged in tree and fruit growing in the province as to the result of their experiments.

They were also in correspondence with the secretaries of several States, in preparation of a Forestry Manual for this province. They had also decided on a recommendation for the establishment of a annual Arbor Day here.

A letter was read from Mr. A. M. Brown, offering the society the free use of twelve acres of ground for six years for experimental purposes. Action was deferred on Mr. Brown's letter until the next monthly meeting of the directors, and the president of the society Attorney-General Miller was requested to take such steps as he may think necessary to procure a proper ground, adjacent to the government buildings at Fort Osborne for the use of the society. It was decided to send an order to Russia for a selection of fruit and tree seeds, and Messrs. Burrows, Keith and Hall were appointed a sub-committee to select the varieties to be ordered.

The meeting then adjourned.

AUSTRALIA.

The monthly circular of Messrs. Lord & Hughes, Melbourne, dated Oct. 24th, says :—

Since our last on the 22nd ultimo, the offerings at auction of most descriptions of timber have been heavy, and the pricss realized all that could have been anticipated considering the large quantities known to be on the way.

The cargo of Oregon, ex Matilda, was offered at auction yesterday, and about half of it was sold at £6 15s to £7 2s 6d, averaging about £6 18s 6d, the squarc timber not being sold.

There is a good demand for American lumber, at advancing prices.

Sales from the Yards have been active the trade doing a large business, which is likely to continue.

The arrivals have been—Adele e Sabina, from Laurvig ; Charlotte Lange," from Drammen ; Schwanden and Thor from Frederickstad ; Governor Wilmot, Greta, General Pictou, Loch Rannoch, North American, Essex, Mirzapore, Sikh, Bowden, Ivanhoe, Carclisle Castle, Normanton, Lock Etive, and Winifred, from Great Britain : Ghazee and Marsala, from Antwerp and Hamburg, and Salazie, from Marscilles, with white deals, red deals, flooring galvanized iron, and cement ; Matilda and Nanaimo, from Burrard Inlet, with Oregon timber, laths and pickets ; Alice Reed, from Boston, and Alert, from Now York, with clear pine, shelving, ceiling, spruce deals, laths and plaster ; Jules Marie, from Kaipara, Killarney, from Monganui, Grassmere, from Wanganui, and Kentish Lass, from Hokianga, with Kauri pine ; Lady Franklyn, Konoowarra, Lindus, Cheviot, and Rodondo, from Sydney, with cedar ; Wendouree and Leura, from Sydney, with laths ; Claud Hamilton, from Adelaide, with slates ; John Lewis, from Adeliade, with spruce deals ; and Ly-ee-moon, from Sydney, with galvanised iron.

RED DEALS.—Imports : 3,814 pieces. The arrivals have been Governor Wilmot and North American, from London. Sales by auction have been made of parcels ex Frigga, Noel, and Kamfjord, from the Baltic, and ex various ships from Great Britain. FWT, 11x3 realizing $4\frac{5}{8}$d to $4\frac{3}{8}$d ; 9x3 $4\frac{1}{2}$d to $4\frac{1}{4}$d ; TWF, 11x3 $3\frac{1}{2}$d ; 10x3 $3\frac{1}{2}$d ; 9x3 3 9-16d : WK, 11x4 4 15-16d ; 9x4 4 13-16d ; 11x3 4 7-16d ; 9x3 $4\frac{7}{8}$d to 4 11-16d ; 8x3 4 9-16d. to $4\frac{1}{2}$d ; DDD, $7x2\frac{1}{2}$ 4d. to 4 1-16d ; Crown Gromoff, 9x3, $4\frac{5}{8}$d to 4 9-16d at per foot running of 9x3.

SPRUCE DEALS.— Imports : 14,056 pieces. The arrivals have beeu Alice Reed, from Boston ; John Lewis from Adelaide ; Adele e Sabina, from Laurvig ; Governor Wilmot and North American, from Londou. The parcel, consistiug of 11x3 and 9x3, ex the Alice Reed, from Boston, was sold by auction on 16th inst. realizing $3\frac{5}{8}$d. per running foot 9x3. Sales have also been made at auction of Baltic white deals, ex Captain Peter Dahl. Adele e Sabina and Frigga, from the Baltic, and ex various vessels from Great Britain.

OREGON TIMBER.—Imports : 1,179,982 feet super. The arrivals have beeu Matilda, and Nanaimo. The cargo ex Matilda was offered at auction on the 23rd inst., when about half of it was sold at an average of about £6 18s 6d. or £6 19s. The cargo ex Nanaimo has not yet been offered at auction. Sales by auction also comprise parcels ex Chrysolite and Oriental.

LUMBER.—Imports, Clear pine, 154,941 feet super ; white pine shelving, 130,977 feet super ; T. and G. ceiling, 34,918 feet super. The arrivals have been Alice Reed, from Boston, and Alert, from New York. The shipment ex Alice Reid was sold at auction on 16th inst., prices showing an advance on last month's rates. Michigan clear pine realized £18 12s 6d to £16 17s. 6d. White pine shelving (Peabody brand), £13 5s to £13 ; T. and G. Ceiling, £9 7s 6d to £9.

PITCH PINE.—Imports : *Nil.*

REDWOOD.— Imports : *Nil.*

FLOORING AND WEATHERBOARDS.—Imports : 7,038,048 feet lineal. The arrivals have been Adele e Sabina, from Laurvig ; Charlotte Lange, from Drammen ; Schwanden, and Thor, from Fredericstadt ; Governor Wilmot, General Pictou, Loch Rannock, North American, Ivanhoe, Carlisle Castle, Lock Etive, and Winefred, from Great Britain. Sales by auction have been made ex Frigga, Union, Adele e Sabina, Captain Peter Dahl, Thyatira, General Picton, and Loch Rannock, when the following prices were realized :—Red $6x1\frac{1}{8}$, 10s 3d to 9s ; 6x1, 8s 6d to 8s 3d ; $6x\frac{7}{8}$, 8s 9d to 7s 3d ; $6x\frac{3}{4}$, 6s to 5s 9d ; $6x\frac{5}{8}$, 5s 6d to 5s ; $6x\frac{1}{2}$, 5s to 4s 6d ; white $6x1\frac{1}{8}$, 9s 3d to 9s ; $6x\frac{7}{8}$. 7s 9d to 7s 3d ; $6x\frac{3}{4}$, 5s 9d to 5s 6d ; $6x\frac{5}{8}$, 5s 3d to 4s 11d ; $6x\frac{1}{2}$, 4s 7d to 4s 3d ; 4-out weatherboards. 5s 9d.

KAURI PINE.—Imports : 925,646 feet super. The arrivals have been Killarney, Jules Marie, Grassmere and Kentish Lass. Sales by auction have been made during the month of cargoes ex Robin Hood, Jules Marie, Killarney, Grassmere and Kentish Lass ; Hewn logs realizing 13s 3d to 11s ; sawn flitches, 16s 6d to 14s 6d.

CEDAR.—Imports : 209,962 feet super. The arrivals have been "Lady Franklyn, Konoowarra, Lindus, Chevoit, and Rodondo, from Sydney. Sales have been made by auction during the month ex Lady Franklyn, Lindus, Konoowarra, and Rodondo ; logs realizing from 58s 6d to 36s 6d per 100 feet super.

RED AND WHITE PINE (Colonial).—Imports : *Nil.* The cargo ex May was sold by auction on 2nd inst., at extremely low rates. There is no demand for this description of timber.

DOORS.—Imports : *Nil.*

WOODEN COLUMNS.

A series of experiments have been conducted on the testing machine at the Watertown arsenal by Prof. Lanza, of the department of mechanical instruction of the institute of technology. The object in view was to ascertain the strength of wooden coluuns of the size and length commonly used in the construction of cotton and woollen mills. The experiments were made at the instance of the Boston Mannfacturers' Mutual Fire Insurance Company, of which Edward Atkiuson is president. This testing machine was recognized as an invention of the greatest importance in the bestowal through a committee of experts, of the gold medal the highest award of recent mechanics' fair. Although it has been for some time in operation for scientific and other tests, it gains through this fact a new interest for the public. A part of the columns thus tested was yellow or hard pine, and a part oak. About a dozen thus far have been subjected to the process of compression in the machine, the strain having been brought upon them endwise for the purpose of ascertaining what is called the "crushing strength" of the timber. Outside of these experiments, and a few others at Watertown, none have been made on wooden columns of sufficient size to furnish reliable data for practice. The experiments made elsewhere, and those on which the formula in text-books on mechanics and the hand-books are based, have been upon columus of about two inches on a side and of four or five feet in length. From the results thus reached the strength of columns of dimensions actually used in building has been computed. It is plain that a series of experiments conducted under the direction of experts, and by them authoritively recorded will consti-

tute much more satisfactory data for the text-books. The experiments, therefore, have a significance beyond the nowise unimportant one that pertains to them in the matter of mill construction. All but two of the columns experimented on were round, hollow columns, of from eight to eleven inches in diameter, the two being about nine inches square. The greatest amount of pressure exerted in any case was 250,000 pounds. The tests have disclosed frequent instances of defective boring in the columns. The object in boring is to open an air passage through the heart of the stick for the prevention of dry rot after it is in position in the building. It is essential, of course, that the bore should extend from end to end, but this has not always been effected. The sticks were bored first from one end then from the other, and the borings have sometimes failed to meet in the middle of the stick. The tests also show that to taper the sticks is a mistake, inasmuch as it weakens the column more than it has heretofore been estimated. Reasons for exercising more caution in other respects in the construction and adjustment of wooden columns in building have also been disclosed.—*Lumberman's Gazette.*

EFFECT OF FROST ON TREES.

It is a prevalent opinion that during cold weather, the liquid in vegetable tissues congeals as ordinary liquid does, and expanding, often causes trees to burst with an explosive sound. In order to test the truth of this opinion, careful experiments were made last winter in Philadelphia, by T. Meehan, with young and vigorous trees, varying from one to three feet in circumference. They were carefully measured in early winter when the thermometer was at 40 degrees, and again after they had been exposed for many days to a temperature below freezing point, but in no case was there the slightest evidence of expansion. In dead wood, however, soaked with water, the expansion was well marked, and the cleavage, with explosion, sometimes noted in the case of forest trees in high northern regions, may result from the freezing of liquid in the centre or less vital parts of the trunks of the trees.

In some hardy succulents, however, instead of expansion under frost, there was a marked contraction. The joints or sections of stem in some of the Cactus plants, shrink remarkably with the lowering of the temperature, As soon as the thermometer passes the freezing point, the shrinkage is so great that the whole surface has the wrinkled appearance presented by the face of some very aged person. The contraction amounts to about 12 per cent., but a knife penetrates the tissues in winter just as easily as in summer, and no trace of congelation of the juices can be found in the plant. Other succulents exhibit more or less shrinkage under extreme cold, and sometimes present the appearance of being withered or dead. They, however, expand again in a few days of warmer temperature.

Assuming from these facts that the liquid in plants which are known to endure frost without injury, did not congeal, it might be a question as to what power they owed this successful resistance. It is probably some vital power, for the sap of plants, after it was drawn from the tree congealed easily. In a large maple tree, which was included in these tests, the juice exuded from wounded portions of the branches and then froze, hanging down icicles often six inches long from the tree.—*Lumber World.*

A National Forest.

The following extract from the message of President Arthur shows that our neighbors are becoming impressed with the necessity for scientific forestry and the conservation of national forests:—

"In my last annual message I called attention to the necessity of protecting by suitable legislation the forests situated upon the public domain. In many portions of the West the pursuit of general agriculture is only made practicable by resort to irrigation, while successful irrigation would itself be impossible without the aid afforded by forests in contributing to the regularity and constancy of the supply of water. During the past year severe suffering and great loss of property have been occasioned by profuse floods, followed by periods of unusually low water in many of the great rivers of the country. These irregularities were in a great measure caused by the removal from about the streams in question of the timber by which the water supply had been nourished and protected. The preservation of such portions of the forests on the national domain as essentially contribute to the equable flow of important water courses is of the highest importance. Important tributaries of the Missouri, the Columbia and the Saskatchewan, rise in the mountain region of Montana near the northern boundary of the United States, between the Blackfeet and Flathead reservations. This region is unsuitable for settlement, but upon the rivers which flow from it depends the future agricultural development of a vast tract of country. The attention of Congress is called to the necessity of withdrawing from public sale this part of the public domain and establishing there a forest reserve.

A Large Contract.

The largest single lumber contract ever made by St. Croix lumbermen is that entered into between Messrs. F. T. Todd & Sons, of the one part, and Messrs. Tracy, Murchie & Love, of the other part. for the cutting and yarding of 7,000,000 feet of logs during the coming winter. The ground to be operated upon covers a block six miles square on the Wissattaquoik stream, in Piscataquis county, Maine, and is bounded on the northest corner by Traveller's mountain, on the northwest by a lake called Big Pond, on the southeast by Turner's mountain, 3,500 feet high, and on the southwest by a spur of Mount Katahdin. It is estimated that there are 100,000,000 feet of lumber in the block, the land being what is known as black land and covered with a splendid growth of spruce, cedar, fir and pine. Sub-contracts for 5,000,000 feet of the lumber specified in the original agreement have been let—to William's & Pattingill for 2,000,000 feet, to McLaughlin & Stewart for 1,500,000 feet and to Smith, Allen & Co., of Machias, Me., for 1,500,000. The remainder will be handled by Tracy, Murchie & Love themselves. —*St. Croix Courier.*

The Poisonous Cocobola.

The *Scientific American* has the following: "The use of wood from Panama called cocobola in the manufacturing interests in Bridgeport, is attracting the attention of the Connecticut state board of health. The wood is cheap, takes a brilliant polish, is easily worked, and is used extensively for knife handles and ornamentation. Workers in the material are poisoned somewhat after the manner of sumac, although some are free from any effect. Swelling of the face, closing of the eyes, appearances of being burned on the hands, are usual symptoms. Some are attacked with distress in the stomach with loss of appetite. One person, who was a confirmed smoker, after being poisoned, has been unable to smoke or even stay in a room where there is any tobacco smoke. Children playing in the saw-dust of this wood, which had been dumped, were badly poisoned about their feet. At a large factory on Elm street, where this wood is extensively worked, chickens in the adjoining yards are said to have all died from eating the dust that settles on the grass."

Cherry Wood.

Cherry wood, filled and not varnished, has a soft glow not possessed by any other, and has none of those distortions of grain that are so unpleasant in mahogany. The timber is chosen from the wild cherry, which in New England and the North generally does not usually grow to a girth of more than 20 inches, but in some of the Western States and in the South frequently attains a diameter of 24 inches. The domestic fruit cherry gives some good specimens of small timber, but as the tree is rarely sacrificed until it is past bearing and is decayed, this source of supply is precarious. The facility with which cherry can be worked makes it a favorite with the cabinet-maker.

State Forestry.

Senator Lynde, chairman of the committee appointed to investigate the denudation of the Adirondack region, in reply to the question of a N. Y. *Herald* representative, "What report will your committee make?" answered as follows:

"I have not consulted with my colleagues on the subject, but personally I shall favor a forestry commission, with authority to trim the woods, of course, judiciously, and sell the lumber for the state. No such devastation has been made as the people are led to believe. The trees are so thick that they stunt each other's growth, and should be cut out and trimmed. Forests grow rapidly and can be easily overgrown. Prussia earned $4,000,000 in one year by the sale of lumber, and the diminution of trees in her forests was hardly preceptible."

Our Trade with France.

OTTAWA, Dec. 11.—The Ottawa correspondent of the *Mail* says that when Mr. Chapleau, was in Paris he had several conversations with the French Premier and others in relation to the increase of trade between Canada and France, and paved the way for the exertions of Sir A. T. Galt, which, however, were not successful. Sir Charles Tupper subsequently took up the subject and received assurance of favorable regard on the part of the Government of France. He will be in Ottawa during the latter part of next week.

A Four Hundred Thousand Dollar Fire.

GLOUCESTER, Mass., Dec, 9.—Annisquam mill at Rockport caught fire this morning from a lighted lantern coming in contact with lint on the belt in the engine room. The fire spread rapidly, completely enveloping the interior. The Rockport fire department was unable to cope with the conflagration, hut with assistance rendered from Gloucester and Salem, the picker room and storehouses were saved. The loss is estimated at $400,000; insured for $300,000.

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Waterous Saw Mill, Daniel Planer, Band Saw, Planer and Matcher, Saw Tables, Shafting, Belting, etc.
If not sold *en bloc* by the 10th of October, will be sold in lots to suit purchasers.
Catalogues giving particulars of the Machinery, etc., can be had from the liquidators, or at the offices of W. H. OLIVE, No. 167 Prince William Street; T. McAVITY & SONS, 13 King Street, St. John; and W. E. SKILLEN, St. Martins. 4L21

HOW WOODEN SPOOLS ARE MADE.

The birch is first sawed into sticks four or five feet long and seven-eighths of an inch to three inches square, according to the size of the spool to be produced. These sticks are thoroughly seasoned. They are sawed into short blocks, and the blocks are dried in a hot air kiln. At the time they are sawed a hole is bored through them. One whirl of the little block against sharp knives, shaped by a pattern, makes the spools at the rate of one per second. A small boy feeds the spool machine, simply placing the blocks in a spout and throwing out the knotty or defective stock. The machine is automatic. but cannot do the sorting. The spools are revolved rapidly in drums and polish themselves. For some purposes they are dyed yellow, red or black. They are made in thousands of shapes and sizes. When one sees on a spool of thread "100 yards" or "200 yards" these words do not signify that the thread has has been measured, but that the spool has been guaged and is supposed to contain so much thread. When a silk or linen or cotton firm wants a spool made it sends a pattern to the spool-maker. This pattern gives the size or shape of the barrel and of the head and bevel. These patterns determine the amount of thread that the spool will hold. Mr. Dwelley's factory turns out 100,000 gross of spools per day, and consumes 2,500 cords of birch annually. His year's spools are worth $40,000. Thirty hands are employed in the mill. During the winter, 250 wood choppers are sometimes employed. Mr. Dwelley is an inventor and a machinist. He invented, designed, and made every machine in his shop. It is a large brick building. Mr. Dwelley also has laths which turn out large quantities of pill boxes and blueing boxes. He, too, says, "I have more orders than I can fill." —*Lewiston (Me.,) Journal.*

FORESTS OF ONTARIO.

Mr. Phipps concludes his report on Ontario forests with the following details as to the different counties :—

FORESTS EXISTING IN ONTARIO COUNTIES.

PRESCOTT AND RUSSELL :—About forty-sevon and a half per cent. of the entire area is under timber, consisting of hemlock, cedar, tamarac, beech, birch, elm, basswood, ash, balsam, pine, spruce, walnut, butternut, whitewood, dogwood, solt maple, and red and black cherry; used principally for lumber, fencing, firewood, railway ties and saw logs.

GLENGARY, STORMONT AND DUNDAS :—Probably about thirty per cent. of the entire area of these counties is still timbered with hard and soft maple, beech, birch, ash, tamarack, elm, basswood, hemlock, spruce, balsam, and some pine ; used for fuel, lumber, railway ties, telegraph posts and shingles.

CARLETON :—About 287,000 acres of land in this county are still uncleared.

LEEDS AND GRENVILLE:—In all the townships except South Burgess and North Crosby, which have suffered from the ravages of fires, there is a large amount of standing timber, consisting mainly of hard and soft woods ; used for firewood, fencing, lumber, buckets and pails.

LANARK :—About twenty-four per cent. of the uncleared land is covered with timber or bush. The timber is chiefly pine. beech, maple, basswood, ash, birch, cedar and tamarack. A considerable export trade in hardwood is carried on. and there is a large local consumption for railway ties, fencing, fuel, etc. A great destruction of pine took place from tho fire in 1870.

RENFREW :—About forty-six per cent. of the entire area is still timbered. Red and white pine exist in large quantities. There is also an abundant supply of ash, elm, maple, basswood, spruce, cedar, tamarack, balsam, poplar, beech and hemlock, Lumbering is extensively carried on for exportation to European and American markets. The hard woods are chiefly used for fuel and cedar for fencing.

FRONTENAC :—As nearly as can be computed, about fifty per cent. of the land in Frontenac is still timbered with pine, basswood, ash, hemlock, beech, balsam, tamarac, cedar and maple ; principally used for lumber, fencing and fuel.

LENNOX AND ADDINGTON :—Owing to the returns being in several instances obviously inaccurate, the extent of land in the counties under timber cannot be estimated. Four-fifths of Denbigh and associated townships are, however, reported to be under pine, maple, beech and cedar, and lumbering is extensively carried on. There is also a considerable quantity of timber in North and South Fredericksburg, in Camden and in Sheffield.

PRINCE EDWARD COUNTY :—About sixteen per cent. of the entire area is still covered with timber, consisting of beech, maple, elm, cedar, oak, black ash and some pine ; used for lumber, fuel, coopers' staves, fencing and building.

HASTINGS :—A large proportion of the acreage is still covered with timber—in some townships to the extent of seventy-five per cent.

HALIBURTON :—About eighty per cent. of the entire area is still covered with timber, consisting mainly of maple, beech, birch, hemlock, basswood, elm, ash, pine, tamarac, and cedar ; used for lumber, fencing, railway ties, telegraph poles, shingles, bolts, sawlogs, etc.

PETERBOROUGH :—A large proportion—not far short of one half of the area—is under timber, consisting of pine, cedar, beech, maple, hemlock, basswood, tamarac, birch and ash ; used for timber, fencing, firewood, shingles, bolts railway ties and telegraph poles. Bush fires have destroyed large tracts, particularly in the township of Harvey.

NORTHUMBERLAND AND DURHAM :— About eighteen per cent. of the total acreage is still timbored with hardwood, cedar, pine, hemlock, and tamarack. The former is used principally for fuel, the latter for building, fencing, and barrel staves.

VICTORIA :—Probably about fifty per cent. of the unclearcd land is under timber, consisting of cedar, pinc, hemlock, maple, birch, bcech, basswood, black ash, mountain ash, balsam, tamarac, oak and elm ; used for lumber, fuel, building and fencing.

ONTARIO :—About seventeen per cent. of the area of Ontario is still under timber excepting the township of Reach, (which returns no percentage), The timber consists of pine, maple, beech, basswood, tamarac, balsam, cedar, black ash, hemlock and elm ; used mainly for lumbor, fuel fences, staves, and domestic uscs.

YORK :—Aout twenty-two and a half per cent. of the area of York is still under timber, consisting of bccch, maple, elm, basswood, pine, homlock, cedar, tamarac, and birch ; used for building purposes, fencing and firewood.

SIMCOE :—It is impossible to glean from the returns the total acreage under timber, but probably over one-half of the entire county area is under maple, bcech, basswood, tamarac, pine, hemlock, ccdar, balsam, birch, ash and oak. Lumbering operations are very extensively carried on in scveral of the townships, and there is a largo amount of business done in hemlock bark (which is largely used within the county, and also exported for tanning purposes), and in railway tics, telegraph poles and shingles. The hardwoods are principally used for fuel, and the soft woods for building and fencing.

PEEL :—About eleven per cent. of the entire acreage is stil under timber, consisting of beech, maple, hemlock, cedar, white aud red oak, ash, elm, hickory and basswood, A few pines are scattered in Chinguacousy and Toronto townships. The timber is generally used for fuel, fencing and domestic purposes.

HALTON :—About seventeen per cent. of the entire area is still timbered, chiefly with hard wood and a limited amount of pine. The timber is principally used for lumber, fencing, and fuel.

WENTWORTH :—Fourteen and a half per cent. probably under timber, consisting of pine, beech, maple, elm, black ash, cedar, tamarack, oak, hickory, walnut, and chestnut ; used for lumber, firewood, fencing, building and general purposes.

LINCOLN :—Exclusive of the township of Caistor, which does not report the area of land still timbered, Lincoln has over 24,400 acres still covered with beech, black ash, maple, elm, oak, hickory, and some pine ; used for firewood, fencing, building and mannfacturing purposes, also for ship timber and railway ties.

WELLAND :—About eighteen per cent. of the area is still under timber, consisting of beech, maple, oak, ash, basswood, elm, hemlock, popular, birch, chestnut, walnut, and butternut ; used for shipbuilding, housebuilding, fencing, and fuel.

HALDIMAND :—About twenty-four per cent. of the acreage is still timbered, consisting chiefly of hard woods ; used for fencing, fuel, and building purposes.

NORFOLK :—About twenty-four per cent. of the entire area is still timbered. and the standing timber consists chiefly of pine, oak, maple, chestnut, black and white ash, elm and cedar ; used for railway ties, lumber, fencing, firewood and general purposes.

BRANT :—About twenty-five per cent. is yet in timber of maple, beech elm, oak, pine, cedar, basswood, tamarac, hickory, and ironwood.

WATERLOO :—About twenty-two and a half per cent. of the area is still timbered with pine, oak, beech, maple, cedar, ash and hemlock.

GREY :—About thirty-four per cent. of the land is still timbered chiefly with hardwood. Very little pine exists and only sufficient cedar for fencing purposes.

BRUCE :—About twenty-five per cent. of the land is timbered. Maple, basswood, elm, hemlock, cedar, ash, beech, and birch predominate ; there is also some pine.

HURON :—About twenty-nine per cent, is covered with timber ; hard and soft woods.

PERTH :—About twenty-one per cent. is covered with timber, consisting of bcech, elm, basswood, black and white ash, pine, hemlock, cedar, birch and tamarac.

OXFORD :—Seventeen per cent. under pine, cedar, beech, maple, elm, ash, basswood and oak.

ELGIN :—Thirty per cent. is timbered with most of the indigenous woods excepting cedor.

MIDDLESEX :—Thirty-five per cent. under hardwood and some pine.

LAMBTON :—Forty-eight per cent. covered with oak, ash, elm, beech, maple, basswood, hickory and somo pine.

KENT :—Thirty-seven per cent. in oak, black and red ash, hickory, hard and soft maple, cherry, and sycamore, some black walnut, and some tulip.

ESSEX :—Two-thirds still under bush, consisting chiefly of whitewood, oak, ash, elm, hickory, bass, sycamore, and other woods.

WELLINGTON :—About fifteen per cent. is still timbered with beech, maple, elm, cedar, hemlock, basswood, ash and balsam.

FORESTRY IN AUSTRALIA.

The *Lumberman* has received the annual progress reports upon the State Forest Administration in South Australia, for 1882-3, by J. Eduie Brown, F. L. S., conservator of forests. This gentleman has the immediate control and management of all details connected with the forest reserves, the selling of timber and produce, etc. The rules regarding the reserves are very strict. Before a sale of any portion of the timber on a reserve, all live trees are officially marked by chipping of the bark and cutting the initials F. D., and the trees must be cut above that mark. It is required that in the felling of trees great care should be taken to avoid injuring the smaller growth, assessments being made against the offending parties in case of damage. The theft of timber or other productions results in prompt prosecution. From October to May no fires are allowed in timber except in the case of parties who have obtained an official permit to establish camps upon such sites as may be pointed out, and a space of 30 feet must be cleared around the camp fires, which must be extinguished upon leaving. The work in progress and proposed for the year 1883-4, is briefly reviewed as follows : The stock in the combined nurseries of the department at the beginuing of the current season's plantiug, amounted to over 600,000 trees. About 280,000 trees will be planted in the plantations this year. The railroads have gone extensively into the planting of forest trees and wattles. The trees set out generally consist chiefly of different varieties of pine, gum, cedar, elm, poplar, sycamore, larch and American catalpa. Of last year's plautiug all the trees in some localities survived, and in others the range of those surviving was all the way from 15 to 90 per cent. Of the trees distributed last year about 80,000 are living, which under existing conditious has proved very satisfactory. These trees cost the government about two cents each, American money. "Looking at the fact," says the conservator, "that a large proportion of this country is destitute of trees ; that a general distribution of those over the length and breadth of the land is absolutely necessary for the proper regulating of our climate, and hence for our agricultural prosperity as a nation ; that the matter, therefore, must be looked upon more from a national point of view than an individual advantage ; and finally that many of our landowners will not and cannot purchasettrees, I think the giving of them away in the manner referred to is a wise piece of political economy upon the part of the government, and should therefore be continued for at least some years to come."

But, while great care is taken of the reserves, a great deal is still said about "the wholesale destruction of Australian forests." It is said that thousands of acres of trees are annually killed by girdling. The wood is either cut into or a ring of bark removed. The trees are killed to improve the pasturage, and miles and miles of dead and bleached trees are the result. No use is put to the destroyed timber, which is left to rot. It thus appears that the government could accomplish more in five minutes by legislating against a criminal slaughter of its natural forests, than it could in a century by "reserve" legislation and planting.—*Northwestesn Lumberman.*

SWEDEN.

The Stockholm correspondent of the *Timber Trades Journal* under date Nov. 10, says :—The usual monthly statistical return of the exports from Sweden for the first nine months of the year having been published, I give the same as compared with a similar period of the three years preceding, viz. :—

Sawn and planed wood.

1883.	1882.	1881	1880.
672,735	597,606	427,442	485,234 stds

Square and partly square timber, &c.

13,183,836 14,126,800 10,435,979 12,396,267 c ft

From these figures it appears that the exports of sawn wood during September have been no less than 123,930 Petersburg standards, against a nearly similar quantity in September, 1882, of 121,810 standards. The figures of the present year are by far the largest on record, and decidedly stultify the estimates of f.o.w, stock made in January by the Society of Saw-millowners. There is now almost the certainty of exports of sawn and planed wood from Sweden figuring up to over 800,000 Petersburg standards this season, and yet there is no appearance of sawn or even log stocks being abnormally low on this side. These latter are doubtless less than they were at this time last year, but when we are informed that one concern alone in Sundswall district has a log stock of over 400,000 sticks within reach, one may be pardoned for attaching but little importance to the assertions so frequently heard on this subject.

Notwithstanding the heavy consumption of the season now passing, and the undoubted vitality of the trade, it is evident that consumers in both France and England must have heavy stocks whatever may be the case at the distributing centres. That importers abroad are aware of this fact, and that consequently prices will be difficult to lift upwards at the turn of the year, we may be well assured of. I can, therefore, only repeat what has been frequently pointed out, viz., that only a substautial reduction in the "log-get" of the incoming winter will prevent the trade from falling still further into the Slough of Despond.

Sawdust to be Made Useful.

There is good reason to believe that sawdust will eventually be fouud of some better service than that of choking up and pollutiug the waters of our rivers. It has already been applied to several purposes in a compressed form, and we uow learn of a still new use to which it has been put. Au exchange says : Pine sawdust, highly compressed, has been successfully used to make up centre frames of carriage wheels. It is said to be so solid that it will bear a pressure equal to 23 tons per square inch. As sawdust has also been used for partitions and bricks, its application to the production of complex carvings and mouldiugs does not seem to be far off.—*Scientific Journal.*

Chips.

THE Milwaukee & St. Paul Railroad Company has issued a notice to railroad contractors that hereafter it will accept only sawed end ties, eight feet long, and up to standard specifications otherwise.

MR. W. S. GILBERT, the dramatic author, has just built for himself a dwelling house in Harrington Gardens, South Kensington, on which it is said he has expended £30,000 on the house alone, before an article of furniture is put into it.

THE Oconto Lumber Company proposes to buy a tug to tow its lumber from its Sturgeon Bay mill through the canal and across Green bay to Oconto for western rail shipment. The move is significant. The company will handle 40,000,000 feet next season.

A rather curious story is told of how a workman in the saw mill of Prewitt, Spurr & Co., Nashville, Tenn., was by some means thrown towards the circular, and evidently thinking he was going upon it, died from fright, which was the verdict of the coroner's jury.

A LOCAL paper at Manistee, Mich., estimates the amount of logs in the waters tributary to that point as follows: In Manistee Lake, 30,000,000 feet; in the river, 30,000,000; in south branch of the Manistee, 16,000,000; and 12,000,000 in Little Manistee, or 80,000,000 feet in all.

THE Orillia *Packet* under the heading Waubaushene, says that a boom containing about thirty thousand logs broke away from its moorings by the force of the big storm, on the night of the 11th Nov. The logs in many places were carried high up on the shore by the waves. It will require a great amount of labor to float and gather them all up again. The logs belonged to the G. B. C. Lumber Co.

THE wholesale destruction of forests in Australia is bitterly complained of by scientific observers. Thousands of acres of timber land are annually killed by cutting a ring around the trees, either into the wood or else by taking a ring of the bark off. Miles and miles of country can be travelled where nothing is found but bleached and dead trees, killed in this manner to "improve the pastures," as the inhabitants think. The wood of these trees is not used, for the dead trunks are allowed to decay on the spot unless burned by some accident.

THE *Timber Trades Journal* of Nov. 17, says:—There is another long list of arrivals to record this week to London; no less than 75 of one sort and another putting in an appearance. The sailing ships are one ahead this time, being 38 eight to 37 steamers. There is not such a great quantity of deal and batten cargoes in the list, but, nevertheless, sufficient to keep the docks active for some time to come. Sweden contributes a dozen complete cargoes out of the 21, and the other Baltic ports with Canada make up the balance. It is expected that when the dock returns are made up we shall still be about a million pieces short. Last year at this date we had to record 54 arrivals to London, but then the freight was quite different to what it is now. The winter promises to begin early, and frost appears to have set in, and a telegram from one of the Gulf ports stated that snow was falling.

THE *Timber Trades Journal* of Nov. 17, says: At Messrs. Churchill & Sim's sale last Wednesday, the 3rd pine, ex War Spirit from Quebec, which fetched a uniform price of £9 10s., may be reckoned as well sold, but the 2nd quality spruce 3x7 by the same ship did not go nearly so well, and must have sunk money at £7 and under. The River Ouelle 3rd pine, we understand, was not a very first-class lot, and at £8 15s. for wide stuff and 5s. less for regulars fetched its full value. The low prices which the Miramichi spruce ex Winchester, described as 1st, 2nd, and 3rd, realized was no surprise to those who had inspected the goods. In fact, they have been mentioned to us as one of the worst cargoes of spruce that have been shipped, and though it was said that the 4ths had been taken out the appearance of the stocks did not seem to warrant the statement.

IT is estimated that 29 per cent. of the acreage of Europe is still in timber. Forty per cent. of the enormous territory of Russia is in forests, and of this 200,000,000 acres are in pine woods. Thirty-four per cent. of the territory of Sweden and Norway is occupied with woods of useful timbers; twenty-six per cent. of Anstralia, 27 per cent. of Germany, 17 per cent of France, seven per cent. of Spain, the timber being cork, oak and chestnut, 5 per cent. of Portugal and four per cent. of Great Britain. Scotland is the only part of the British Empire (including the colonies) in which the planting of timber is going on to any considerable extent. Sweden is now the country from which the world's supply of fir timber and deals chiefly comes.

A remarkable instance of the rapid growth of the forest trees recently came to light, which was the result of a search for the original survery marks, placed upon a beech tree by the surveyors about twenty-seven years ago. Messrs. Jos. Russell and W. N. Marr were searching for a corner of section 7, town 17 north, range 2 west, and found it by chopping into the side of the tree about three inches and splitting a section off which uncovered the original mark, which shows the letters "N. T. B." which were indented in the flatted surface by the government surveyors, The wood is perfectly sound and solid, and the black paint still adheres to the surface. The specimen will be placed on exhibition to satisfy the curiosity of the public. —*Lumberman's Gazette.*

THE London *Canadian Gazette* of October 19 says:—Holders of New Brunswick Land and Lumber Company's bonds will be interested in hearing what the directors of the parent company have to say concerning the Lumber Company. The Railway Company own all the Lumber Company's shares (14,000), and they guarantee the bonds. The Lumber Company own 1,650,000 acres "of the best farming and lumber land in tht Province of New Brunswick," and by reason of the increased facilities which the railway now offers for transportation, as well as of other advantages leading to the better marketing of lumber, the shares of the company are expected to prove a valuable asset. To date, the Lumber Company owes to the Railway Company $145,810.

THE *Northwestern Lumberman* says:—There recently arrived in this city from Humboldt county, California, the largest plank ever seen in Chicago. It is 52 inches wide, three inches thick, 14 feet long, and was cut from one of the monster redwood trees. Accompanying the plank were several bunches of shingles, and the perfection of their manufacture shows that on the Pacific coast they are not behind their Eastern friends in shingle making. Some of the shingles are of the regulation pattern, while others have rounded and pointed butts, fitting them for use where fancy work is wanted on spires, mansard roofs, or on houses on the Queen Anne style of architecture. It is probable that a redwood lumber yard will be established in Chicago in the near future.

THE first semi-annual meeting of the National Association of Lumber Dealers, says the *Northwestern Lumberman*, will be held Wednesday, December 5, at the Tremont House, Chicago. It will be remembered that at the last annual meeting, held in May, it was decided to meet twice a year, on the ground that a more frequent coming together of the members would increase their zeal, and have a generally beneficial result. From appearances there will be a well attended and interesting meeting, and judging from the questions that have been agitated, and the complaints and inquiries which have for some time flooded the *Lumberman* office, there will be several grievances and a kick or two to spice up the proceedings. It will at least furnish opportunity for the members to have an understanding on various important points, and those who have any matters to adjust or discuss should make it a point to be on hand for that purpose.

HE SPEAKS FROM EXPERIENCE.—R. N. Wheeler, of Everton, some six years ago was attacked with a severe form of inflammation of the lungs, leaving him with a severe cough. He speaks highly of Hagyard's Pectoral Balsam, which cured him, the complaint not having troubled him since.

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Market Reports.

MONTREAL.

*From Our Own Corresponden*t

DEC. 8.—Business done during the past two weeks has been quite of a hand to mouth character and no change is expected until after stock taking and the holiday season. As we anticipated in last report laths have again advanced in price and are held firmly at our quotations. The quantity of lumber which arrived here by the canal during the past season was brought by 304 vessels and amounted to 42,655,000 feet. This was entirely for city consumption and does not include what passed through for shipment. The arrivals by rail will not be made up till the end of the year, when we hope to be able to give a complete statement of both arrivals and shipments for 1883. There is some idea of Congress taking the duty off lumber ($2 per M feet), which would create a large demand from the Canadian manufacturers, but it is not thought probable that it will be agreed to,as manufacturers in the Western States and manufacturers of spruce lumber in the State of New York are decidedly opposed to the movement. With the exception of laths our quotations ex yard are unchanged :

Pine, 1st quality, ℔ M	$35 00@40 00
Pine, 2nd " ℔ M	22 00@24 00
Pine, shipping culls, ℔ M	14 00@16 00
Pine, 4th quality deals, ℔ M	11 00@12 00
Pine, mill culls, ℔ M	10 00@12 00
Spruce, ℔ M	10 00@13 00
Hemlock, ℔ M	9 00@10 00
Ash, run of log culls out, ℔ M	20 00@25 00
Bass, " " ℔ M	17 00@20 00
Oak, ℔ M	40 00@50 00
Walnut ℔ M	60 00 100 00
Cherry, ℔ M	60 00@80 00
Butternut, ℔ M	35 00@40 00
Birch, ℔ M	20 00@25 00
Hard Maple, ℔ M	25 00@30 00
Lath, ℔ M	2 25@ 0 00
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 50@ 0 00

CORDWOOD.

There has been a fair business done in wood during the past two weeks, but the mild weather of the last day or two has caused it to fall off again, Prices are unchanged and are still quoted from the yard ex cartage as follows :

Long Maple	$ 6 00
Short "	5 50
Long Birch	5 50
Long Beech	5 00
Tamarack	5 00

TORONTO.

From Our Own Correspondent.

DEC. 10.—The demand from the retail yards during the past two weeks has been quite spasmodic in character, for a few days some dealers would have all they could do to supply the wants of their customers and again become quite slack, but some dealers, favorably situated as to location, where buildings are being erected more thickly, have kept busy right along, and, in consequence of the continued open weather, the building season is being prolonged beyond the usual period. so that all things taken into consideration. I fancy that dealers will not have much to complain of at the close of their season's business.

In consequence of the now absolute certainty of small stocks being got out this winter prices have stiffened to some extent. Some kinds of bill stuff sold by wholesale dealers two weeks ago at $11.50 per M. by carload, is now held firmly at $12 per M., and the quantity coming in by rail is quite small which will give dealers the opportunity of clearing off some of their surplus stock piled on the dock and in the railroad yards.

On going to the various retail yards to find the amount of trade done by each one during the year, I find it utterly impossible to give reliable figures by that method as most of the dealers do not keep any track of the quantity sold by them, except as to the dollars and cents. So I have taken the only course available, viz., by computing the entire quantity which found its way into our city during the year, and deducting the shipments by water, leaving the balance as being the amount handled by the retail dealer, but it must be borne in mind that probably one-fifth of the remaining balance has been sold by the middlemen direct to the con sumers.

During the year the total quantity arriving by rail foots up a total of 132,000,000 feet of pine lumber and about 1,000,000 feet of hardwood, and of shingles about 5,000,000, sawn lath about 10,000,000 pieces ; and of this amount 52,000,000 feet of lumber, 2,500,000 shingles and 3,000,000 lath have passed over our docks chiefly to American ports, and if we assume that 1,000,000 feet of lumber has been transhipped for points west the quantity consumed here during the season would be in round numbers 79,000,000 feet of lumber, 2,500,000 shingles and 7,000,000 pieces of lath. The most of the hardwood has been shipped or is now in stock here, and the quantity piled in yards and on docks will vary but slightly from that piled at this time last year, so that the total volume of trade done on the local market is fairly good.

The manager of the Midland Railroad has performed a graceful act in so far meeting the wishes and interest of the lumbermen here by throwing off the charge formerly collected for shunting cars to the different siding in this city, and the cordiality heretofore existing between the manager of that line and the lumbermen will be more fimly cemented thereby, and it is certainly not anything to the credit of the N. & N. W. R. R. magnates that they should hold so tenaciously to that which they know to be so obnoxious to the parties affected thereby. It may not be amiss to compare the rates now levied by the two roads. Taking Gravenhurst and Midland as the two starting points and Parkdale as the ultimate destination for a car of lumber of 2,400 lbs. weight. The N. & N. W. charge $21.60 to Toronto and $2 to shunt to Parkdale, making a total of $23.60. The Midland charge is $20.40, deduct from this $1 paid by them to the G. T. R. R. for shunting, and $1.50 to the C. V. R. R. for the use of their siding at Parkdale, leaving them $17.90 net as a freight charge, and $5.70 less than the charge made by the N. & N. W. R. R., and for shunting to Stachan avenue siding, midway between the city and Parkdale, the latter company collect $22.60 for the same service, and the Midland R. R, $19,40,

It has been charged by some people, but not by many I am happy to say, that I am actuated by malice in bringing forward these charges against the management of the N. & N. W. R. R. This I deny. I speak of facts as I find them, deny them who can.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	14 00
" stocks	14 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	17 50
" " " 26 ft	18 00
" " " 28 ft	19 00
" " " 30 ft	21 00
" " " 32 ft	22 00
" " " 34 ft	24 00@25 00
" " " 36 ft	27 00
" " " 38 ft	28 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	24 00
" boards "	18 00
Sound dressing stocks	18 00
Picks Am. inspection	28 00@30 50
Three uppers, Am. inspection	35 00@45 50
B. M.	
1½-inch flooring, dressed	32 00
1½ " " rough	16 00
1¼ " " dressed	26 00
1¼ " " undressed	15 00@16 00
1 " " dressed	22 00
1 " " undressed	16 00
⅞ Beaded Sheeting, dressed	22 50
Clapboarding, dressed	14 00
XXX sawn shingles, ℔ M	3 00
Sawn Lath	2 50

WINNIPEG.

The Winnipeg *Commercial* of Dec. 4, says : The demand is light at present, and no briskness is expected until the revival of building operations in the spring. The Quotations remain as follows :—Pine lumber, 1st, common boards, dressed, $26.50 ; 2nd, dressed, $25.50 ; 1st, do rough, $26.50 ; 2nd, do., $25.50 ; sheathing, rough, $25 ; timber, 16 feet and under, $24 ; do. over 16 feet, for each additional 2 feet, $1 ; dimension and joists 16 feet and under, $24 ; do. over 16 feet for each $1 ; fencing, $25 ; 2 and 3 inch batttens, $30 : A. stock boards, all widths, $50 ; B. do., $45 ; C. do., $40 ; D. do., $35 ; 1st clear. 1, 1¼, 1½, and 2 in, $60 ; 2nd do. $56 ; window and door casings, $50 ; base boards, dressed, $50 ; 1st pine flooring, siding and ceiling $40 ; 2nd do $35 ; 3rd do., $30 ; ½ inch split siding, dressed, $30. Spruce lumber —timber 16 feet and under, $22 ; do. over 16 feet, for each additional 2 feet, $1 ; dimensions and joists, 16 feet and under, $23 ; do. over 16 feet, for each additional 2 feet, $1 ; boards, $22 ; 1st flooring, siding and ceiling, $28 ; XX shingles, $5.25 ; Star A shingles, $5.25 ; X shingles, $5.00 ; A do. $4.50 ; lath $4.50.

ALBANY.

Quotations at the yards are as follows :—

Pine, clear, ℔ M	$55 00@60 00
Pine, fourths	50 00@55 00
Pine, selects	45 00@50 00
Pine, good box	22 00@33 00
Pine, 10-in. plank, each	00 42@00 46
Pine, 10-in. plank, culls, each	00 23@00 25
Pine boards, 10-in	00 28@00 32
Pine, 10-in. boards, culls	00 18@00 21
Pine, 10-in. boards, 16 ft., ℔ M	28 00@32 00
Pine, 12-in. boards, 16 ft	30 00@34 00
Pine, 12-in. boards, 13 ft	27 00@29 00
Pine, 1½ in. siding, select	42 00@45 00
Pine, 1½-in. siding, common	18 00@19 00
Pine, 1-in. siding, select	43 00@45 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 12@00 12
Hemlock, boards, each	00 00@00 14
Hemlock, joist, 4x6, each	00 00@00 33
Hemlock, joist, 2½x4, each	00 00@00 14
Hemlock, wall strips, 2x4, each	00 00@00 11
Ash, good, ℔ M	40 00@43 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@85 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	40 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@30 00
Hickory, ℔ M	40 00@40 00
Maple, Canada, ℔ M	28 00@30 00
Maple, American, per M	26 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 50
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 5 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 50
Lath, hemlock, ℔ M	0 00@ 2 25
Lath, spruce, "	0 00@ 2 50

BOSTON.

Cotton, Wool and Iron of Dec. 8, says :—About all that can be said for trade in our market is that it is moving along quietly and pretty steadily. Good dry stock is well in hand and holds its own, while coarse and poor grades are rather dull and weak in some cases. Advices from Chicago are that list prices for December on pine have been advanced one dollar per 1,000 feet on most grades by the trade. Western pine here is quiet but pretty firm for desirable grades. Eastern pine and hemlock are quiet and steady, Spruce is pretty firm for random cargoes. Laths have rather an easier tone. Yellow pine is in limited call at about steady prices. Hardwoods are rather quiet, but choice stock is so well in hand that prices seem to fully hold their own on such.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

BUFFALO.

We quote cargo lots :—

Uppers	$46 00@48 00
Common	18 00@22 00
Culls	13 00@15 00

CHICAGO.

The *Northwestern Lumberman* of Dec. 8th, says :—The pleasant weather characteristic of the past weak has given opportunity for bringing forward the fag ends of shipments, and though the season was virtually closed a week ago, a large quautity of lumber has arrived for December. The total number of cargoes arrived up to Wednesday was 98, the majority going directly to the yards, the regular barge lines, of course, figuring the most heavily in arrivals. Each day cargoes have been sold at the docks, but the offerings have been too few to make a market, as the frequenters there understand the term. Whenever a cargo has been offered there were a dozen buyers ready to take it, and prices have as a necessity been tending toward an advance. Short piece stuff has sold for $10 a thousand during the week, that a month ago would have sold for $9 to $9.50, The advance in freights has contributed to higher prices for lumber. Rates from Muskegon are now $2.25, and from Manistee $2.50, with few vessels willing to go out. Another storm, which at this writing seems imminent, would wind up the marine business for the season. One prominent commisssion firm has but one cargo more coming, and another has but three. The end is right here, and the commission men will soon have hold of it. It is probable that with an open December, an effort will be made to bring over lumber that has been bought to fill up yard stocks, but the success of such ventures will altogether depend on the weather.

Quotations are as follows :—

Short dimension, green	$ 9 50@10 00
Long dimension, green	10 50@11 50
Boards and strips—No. 2	11 50@13 00
Boards and strips—Medium	13 00@16 00
Boards and strips—No. 1	16 00@21 00
Shingles, standard	2 00@ 2 10
Extra A	2 20@ 2 60
Lath	1 65@ 1 75

Receipts of lumber, shingles, etc., for the week ending Dec. 6, as reported by the Lumberman's Exchange :—

RECEIPTS.

	Lumber.	Shingles
1883	31,470,000	22,863,000
1882	21,723,000	16,301,000

FROM JANUARY 1, 1883, TO DECEMBER 6, 1883, INCLUSIVE.

RECEIPTS.

	Lumber.	Shingles.
1883	1,822,622,000	1,223,962,000
1882	2,040,415,000	968,739,000
Increase		255,223,000
Decrease	217,793,000	

STOCK ON HAND NOV. 1.

	1883.	1882.	1881.
Lumber	665,947,082	706,652,450	599,525,483
Shingles	389,972,515	278,158,150	249,960,400
Lath	83,359,413	63,527,227	44,156,792
Pickets	2,646,462	3,079,436	2,809,670
Cedar posts	751,571	150,835	211,297

OSWEGO, N. Y.

Three uppers	$45 00@46 00
Pickings	35 00@36 00
Fine, common	20 00@25 00
Common	14 00@17 00
Culls	11 00@15 00
Mill run lots	15 00@20 00
Sidings, selected, 1 inch	30 00@35 00
1½ inch	30 00@36 00
Mill run, 1x10, 12 inch	18 00@20 00
selected	22 00@26 00
Shippers	14 00@17 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	22 00@35 00
Shingles, XXX, 18 inch, pine	4 00@ 4 50
XXX, 18 inch, cedar	3 25@ 3 50
Lath	2 00@ 2 20

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$45 00@46 00
Common	18 00@24 00
Culls	12 00@14 00

LIVERPOOL.

The *Timber Trades Journal* of Nov. 24th, says :—The tone of the market continues upon the same dead level that has marked it for some time past, nor are there any indications of an advance in price for the immediate future, as with some few exceptions our market is supplied more freely than is desirable. The impending strike of coal miners will have no inconsiderable effect upon the timber trade of this district if it should eventually assume the widely-spread proportions that are at present indicated, and apart from this the unsatisfactory condition of the shipbuilding trade will also, in a minor degree, tend to restrict business. At the same time the fact cannot be disguised that a considerable quantity of goods of one kind and another is being turned over, but it must be done on the barest margin of profits, so keen is the competition for orders.

The arrivals of spruce deals have somewhat diminished, but the market has not been strengthened thereby, although it is more than possible that some cargoes may be stored, on account of the importers, who have faith that there will be an improved condition of things after the turn of the year.

LONDON.

The *Timber Trades Journal* of Nov. 24th, says :—If we have a sharp winter—a long one we cannot have, as we are already near the end of November and no appearance of frost—there may be time for prices to recover, and we are glad to note that the dock deliveries keep active, which will tell its tale when the supplies from abroad have ceased.

There can be no doubt that prices have reached a very low ebb ; in fact, we should have to go back several seasons to match them, and any alteration can hardly help being for the better.

There is one thing in respect to the forest productions from the Baltic which gives to the market prices of the manufactured timber an uncertain tone, and that is the difficulty always experienced in arriving at something definite in

respect to the log cuttings over there. When we hear that the log crop will be short—and statistics, so far as they can be obtained, are furnished which go to sustain the statement—it as often happens as not that the shipments to this country are of an excessive character, and, instead of the expected limitation, the market is glutted with wood of every description.

This is not the case with Colonial goods, and when it is currently reported that stocks at the mills will not be large, the results of the season's shipments generally bear it out.

GLASGOW.

The *Timber Trades Journal* of Nov. 24, says: Results of two public sales held within the past week are noted below. Quebec timber and deals, also pitch pine, were disposed of at the Greenock sale, which was fairly attended; and at the sale here on the 21st inst. the catalogue comprised New Brunswick birch and spruce logs, and Quebec and New Brunswick pine and spruce deals. The attendance was large. Standard-sized deals are still held at firm rates. The other and smaller dimensions are let go at slightly reduced rates. Competition at public sale being languid, of the goods catalogued a large proportion was withdrawn.

As wood importations to Glasgow this year have been larger than usual, the harbor authorities have made vigorous efforts to meet the demand upon them for accommodation on the north side of the river; but the space available is found rather limited, the quays being now much hampered, and it is evident that means must be taken to provide more adequate storage for imports of wood at Glasgow.

AUCTION SALES.

On 15th Nov., at Greenock, Messrs. Allison, Cousland & Hamilton, brokers:

Quebec waney boardwood—		per cub ft
57 c ft av per log		1s 8d
Do. red pine—		
30 to 40 "		1s 3½d to 1s 5d
Do. oak—		
34 "		1s 7½d to 1s 8d
Pitch pine planks 3 &4 in.		1s
Quebec 3rd spruce deals—		
12×9×3		9¾d
15×9×3		10d

On 21st Nov., at Glasgow, Messrs. Singleton, Dunn, & Co., brokers:—

Campbellton, N. B., pine deals—		
9 to 24 ft	10/16×3	11½d
9 " 25 "	7/9×3 & 2½	10d
Do. spruce deals—		
9 to 24 ft	9/16×3	10½d & 10d
13 " 24 "	7×3	9¾d
9 " 12 "	7×3	9½d
9 " 24 "	6×3 & 2½	9½d
Miramichi spruce (1st, 2nd & 3rd)—		
10 to 20 ft	10×3	10¾d
13 " 23 "	7×3	9½d
10 " 25 "	6/7×2½	9¾d & 9½d
12 " 20 "	3/6×3 & 2½	8d
Quebec 3rd spruce deals—		
12 ft	11×3	11d
Do. 3rd pine deals—		
16 ft	11×3	11d
Do. 1st pine deals—		
12 ft	5×3	2s 3d
10 & 11 "	6×3	2s 1½d
New Brunswick birch timber		1s 6½d to 1s 8d
Do. spruce and pine "		1s 1½d
Do. poplar "		1s 2d

TYNE.

The *Timber Trades Journal* of Nov. 24th, says:—During the last seven days we have to chronicle the largest arrivals of wood goods there have been for several weeks past, a considerable number of vessels having arrived from the Baltic with deals and battens, one cargo from Miramichi, a cargo of dressed boards from Drammen, a cargo of battens from same place, and several cargoes from Norway and Sweden with pit-props. These arrivals will bring up the importation nearer to that of last year, though it will still be a good way behind that of last season; up to end of October, the quantity of loads was 208,618 as compared with 229,966 in the same period of 1882.

Your readers will notice that West Hartlepool is also about 11,000 loads short of 1882, whilst Sunderland is 9,000 loads over; the latter is accounted for partly by the fact that the industry of sleeper preserving has been a little more developed, and also that some merchants who were formerly importing pitwood to Tyne Dock for South Durham colleries, now import to South Dock, Sunderland, and deliver from there.

Trade is still fairly active throughout this district, though certainly not so much doing as a month or two ago. Stocks are not increasing in any wood goods except mining timber and pitwood, of which there is still too much on hand. Prices remain in much the same condition.

RECEIPTS FOR DYING WOOD.

ROSEWOOD.

Boil a half a pound of logwood in three pints of water till it is of a very dark red; add one-half ounce of carbonate of potassa. While boiling hot, stain the wood with three coats taking care that it is nearly dry between each; with a stiff, flat brush form streaks with a black stain made by boiling one pound of logwood in four quarts of water, then adding a double handful of walnut shells, boiling it up again, taking out the chips and adding pint of vinegar—to be applied hot. If carefully executed it will give the appearance of dark rosewood.

OAK STAIN.

Two quarts of boiled oil; half a pound of ground umber, mixed in oil by colorman; one pint of liquid driers, turbine; one pint of turpentine; mix. After cleaning and planing your boards, lay this on with the grain of the wood. If required lighter add naphtha till the required shade is attained; it darkens with age. Give it twelve hours to dry; then varnish with wood varnish, or use only beeswax and turpentine. The result is good in time, but slower than varnish.

MAHOGANY.

Wash over the wood with strong aquafortis, and when dry apply, boiling hot, a stain made of two ounces of logwood, eight ounces of madder, one ounce of fustic, one gallon of water; boil two hours.

EBONY.

Wash the wood with a solution of sulphate of iron; repeat two or three times; when dry apply three coats of a strong, hot decoction of logwood; when dry wipe it with a wet sponge and polish with linseed oil.

BROWN STAIN.

Paint the wood with a solution made by boiling one pot of catechu with thirty parts of water and a little soda; when dry paint over with another solution made of one part bichromate of potash and thirty parts water. By a little difference in the mode of treatment, and by varying the strenth of the solutions, several shades of color may be given.—*H. L. D., Rhode Island.*

Wood Pulp.

In the first stages of manufacture of wood pulp for paper, poplar was pre-eminently adapted for the purpose, and for a good while it was thought that only this wood, basswood and a few other kinds could be ground into a suitable pulp. Now, however, machines are made which turn out pulp with equal facility from all kinds of wood. The longest fibre is made from willow, basswood and poplar ranking next respectively. Cedar, fir and hemlock are said to work about alike; maple has a fibre shorter than that of either spruce or pine, and is quite hard to grind; birch is very hard and grinds quite short. Poplar and buckeye pulps remain white for a considerable time, other woods changing color; birch becomes pink, maple turns purple, and basswood takes a reddish hue.

Water in Timber.

The amount of water present in freshly cut wood is very different as is shown by the following table by Scheubler and Hartig: Hornbeam contains 18.6 per cent of water; willow, 26 per cent.; ash, 28.7 per cent.; birch, 30.8 per cent.; oak, 34.7 per cent.; pine, 39.7 per cent.; red beech, 39.7 per cent.; elm, 44.5 per cent.; larch, 48.6 per cent.; and white poplar, 50.6 per cent. Wood, when dried at 266 F., at which temperature all of the hygroscopic water is expelled, is composed of 50 parts carbon (inclusive of one part of ash) and 50 parts of chemicals.

SINGERS and public speakers are always benefitted by using Down's Elixir, as it removes the hoarseness and increases the power of the voice. Take small doses often. Price, 25c, 50c, and $1.00

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Oct. 31st, 1882 and 1883, and also the Consumption for the month of Oct, 1882 and 1883:—

	Stock, Nov. 1st, 1882.	Stock, Nov. 1st, 1883.	Consumption for the month of Oct., 1882.	Consumption for the month of Oct., 1883.
Quebec Square Pine	377,000 ft.	406,000 ft.	495,000 ft.	342,000 ft.
" Wancy Board	340,000 "	391,000 "		
St. John Pine	60,000 "	59,000 "	38,000 "	34,000 "
Other Ports Pine	52,000 "	80,000 "	10,000 "	8,000 "
Red Pine	60,000 "	64,000 "	9,000 "	9,000 "
Pitch Pine, hewn	759,000 "	309,000 "	127,000 "	100,000 "
" Sawn	680,000 "	543,000 "	84,000 "	308,000 "
Planks	60,000 "	000,000 "	00,000 "	00,000 "
Baltic, &c., Fir	47,000 "	113,000 "	35,000 "	38,000 "
Sweden and Norway Fir	16,000 "	69,000 "	2,000 "	10,000
Oak, Canadian and American	357,000 "	312,000 "	51,000 "	129,000 "
" Planks	86,000 "	179,000 "	53,000 "	13,000 "
" Baltic	45,000 "	21,000 "	3,000 "	0,000 "
Elm	71,000 "	25,000 "	22,000 "	20,000 "
Ash	— "	— "	— "	— "
Birch	54,000 "	162,000 "	36,000 "	67,000 "
East India Teak	34,000 "	39,000 "	19,000 "	2,000 "
Greenheart	126,000 "	109,000 "	2,000 "	8,000 "
N. B. & N. S. Spruce Deals	13,154 stds.	23,204 stds.	6,882 stds.	9,462 stds
" Pine	550 "	1,095 "	3,198 "	3,951 "
Quebec Pine & Spruce Deals	6,641 "	8,848 "	1,329 "	1,559 "
Baltic Deals,	4,177 "	5,597 "	548 "	
Norway, &c., Boards	664 "	291 "	213 "	81 "
" prepared Flooring	2,455 "	3,651 "	903 "	716 "

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MACHINE OILS

OF EVERY DESCRIPTION.

9 Common Street, Montreal.

AMERICAN LUBRICATING OILS A SPECIALTY.

As I carry the LARGEST and BEST assorted Stock of OILS in the Dominion, I am prepared to fill all orders Promptly and at

LOWEST MARKET PRICES. 1y20

JONES & SON,

Wholesale Lumber & Timber Dealers

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Oak, Ash, Cherry, Black Walnut, Poplar, Butternut

And all other Kinds of HARDWOOD LUMBER.

White and Yellow Pine Lumber and Timber.

Oak Ship Plank and Timber. Pine Deck Plank and Ship Stock Generally. L7

WILLIAM COOK & SONS,

GLASGOW STEEL and FILE WORKS,

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Manufacturers of Best Quality Steel, Files, Saws & Crucible Steel Castings.

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Also, Sole Manufacturer of BLAKE'S CHALLENGE STONE BREAKER.

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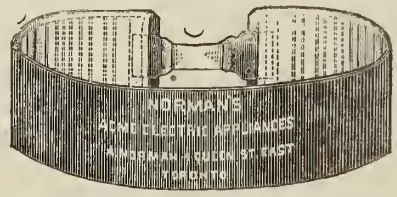
Established 1874.



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Ask for NORMAN'S ELECTRIC BELTS and you will be safe against imposition, for they will do their work well and are cheap at any price.

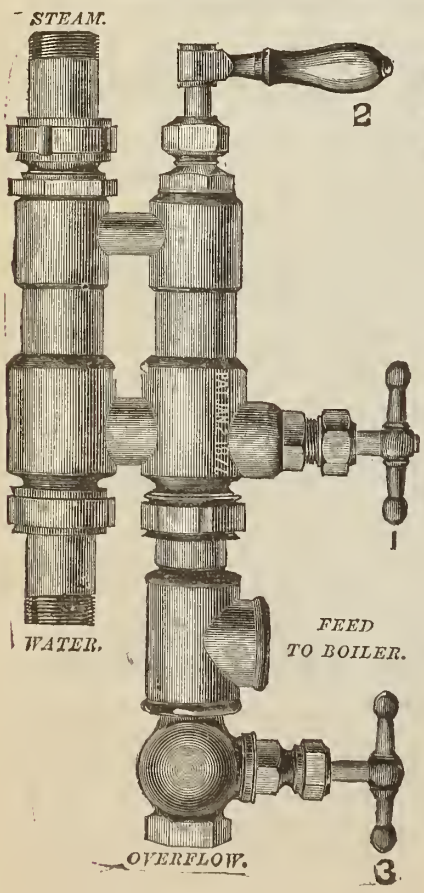
A. NORMAN, ESQ.—Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly,

C. L. TILLEY, WATERVILLE, N.B.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4 Queen Street East, Toronto.

NORMAN'S ELECTRO CURATIVE TRUSS is the best in the world. Guaranteed to hold and be comfortable. Circular free. N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. 1yL7



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The Best Feeder known for Stationary, Marine or Locomotive Boilers.

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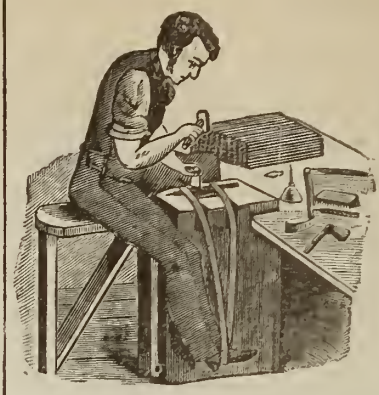

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FILES FOR SALE. FILES RE-CUT

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SPECIALTY:—Belting made from J. B. HOYT & Co's American Oak Tanned Leather. Send for Price List and Discounts.

SAW MILLS!

Having POLE ROADS to their Timber keep up the Mill Stock and run the year round.

Pole Roads are Cheap, Durable and Speedily built. The Cars can be built by any handy man in a couple of days, and will carry 2,000 feet of Hardwood Logs at a Load, drawn by one Span of Horses.

The Wheels are adjustable on the Axles to accommodate themselves to any bend in the poles.

The Iron Work complete, including Bolts and Washes, with a diagram of Car, are supplied by the undersigned. Prices on Application.

As to cost and utility of Pole Roads we will refer without permission to E. WATT, Gesto, P.O.; W. EDGAR, Kilroy, P.O.; DUNSTAN & IRWIN, Essex Centre, and JAMES NAILOR, Oil City, who are now running respectively 10, 8, 5 and 3 miles, and are stocked with our Cars.

C. NORSWORTHY & CO.,

ST. THOMAS, ONTARIO.

Patentees and Manufacturers of Moore's Improved Taper Cone Feed Saw Mills L7tf

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MOCOCK & SON

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—MANUFACTURERS OF—

AXES and EDGE TOOLS

OF EVERY DESCRIPTION.

Old and Reliable, the Best Axes made in Canada.

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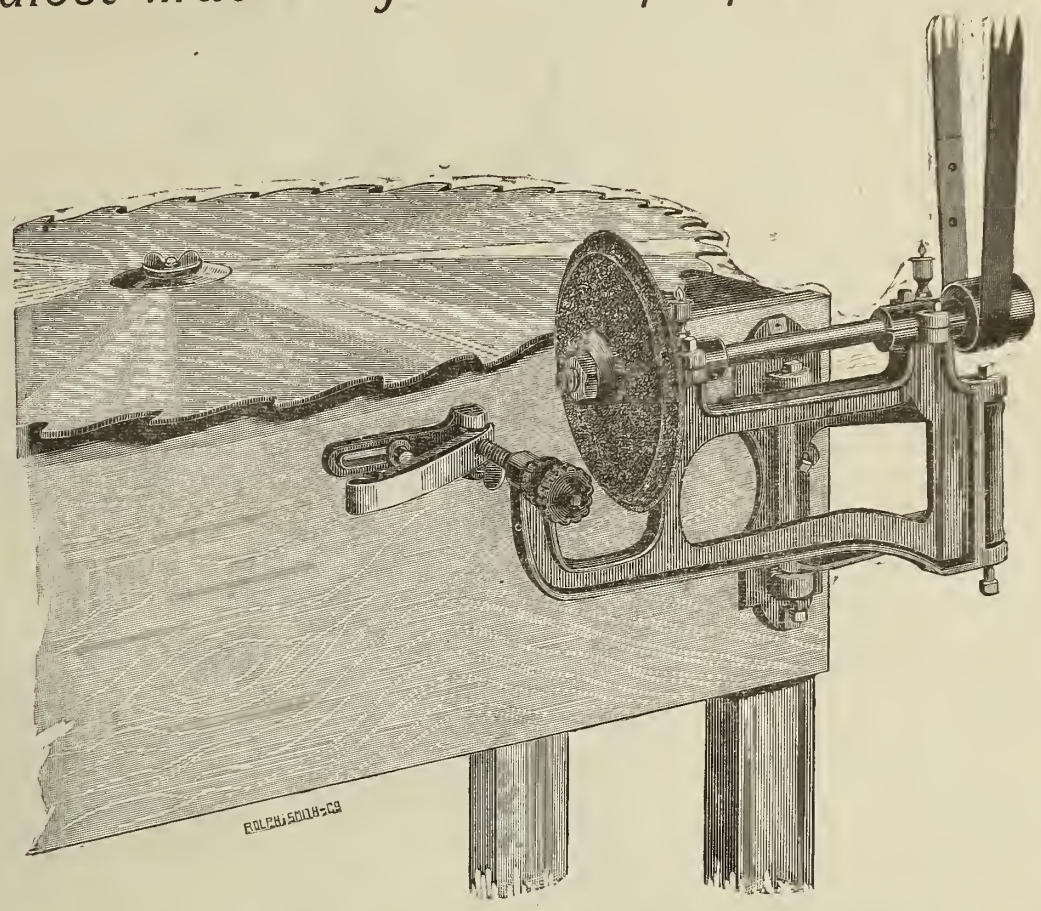
ROGERS' PATENT
SAW GUMMER and SHARPENER

The Handiest Machine for these purposes ever Invented.

Don't Heat!

Cheap!

Very Simple!



Accurate!

Works Fast!

Complete!

Lumbering Season, 1884

Saw Mill Owners in providing for the season of 1884, ought not to lose sight of ROGERS' SAW GUMMER for it will save them more money in proportion to the amount invested than any other machine.

Only $30, including Emery Wheel; Table and Countershaft, $10 extra.

A few of ROGERS' SAW GUMMERS were put on the market last season, and we quote some of the commendations received:

JAS. HADDEN, Foxmead, says:—
"Your machine is all I expected."

CHAS. ANDERSON, Anton Mills, says:—
"I have given it a good trial, and am well pleased with it. "I find it is one of the indispensables in a saw mill." * *

ROBT. R. WEIR, Orillia, writes:—
"It works like a charm, and is very accurate in its work."

CRONE & PATTON, Hoc Roc Mills, Gravenhurst, says:
"The Rogers' Saw Gummer purchased from you gives "good satisfaction, * * it cannot be beat."

D. DAVIDSON, Pentanguishene, writes:—
"We are well pleased with the Gummer."

W. W. BELDING, Wyevale, writes:—
"I have the Gummer running and it is giving good "satisfaction."

ADDRESS ALL ORDERS TO THE

Hart Emery Wheel Company, Limited - Hamilton, Ont.

☞Manufacturers of Hart's Celebrated Patent Wire Strengthened Emery and Corundum Wheels.

The William Hamilton Manufacturing Co'y (LIMITED,)

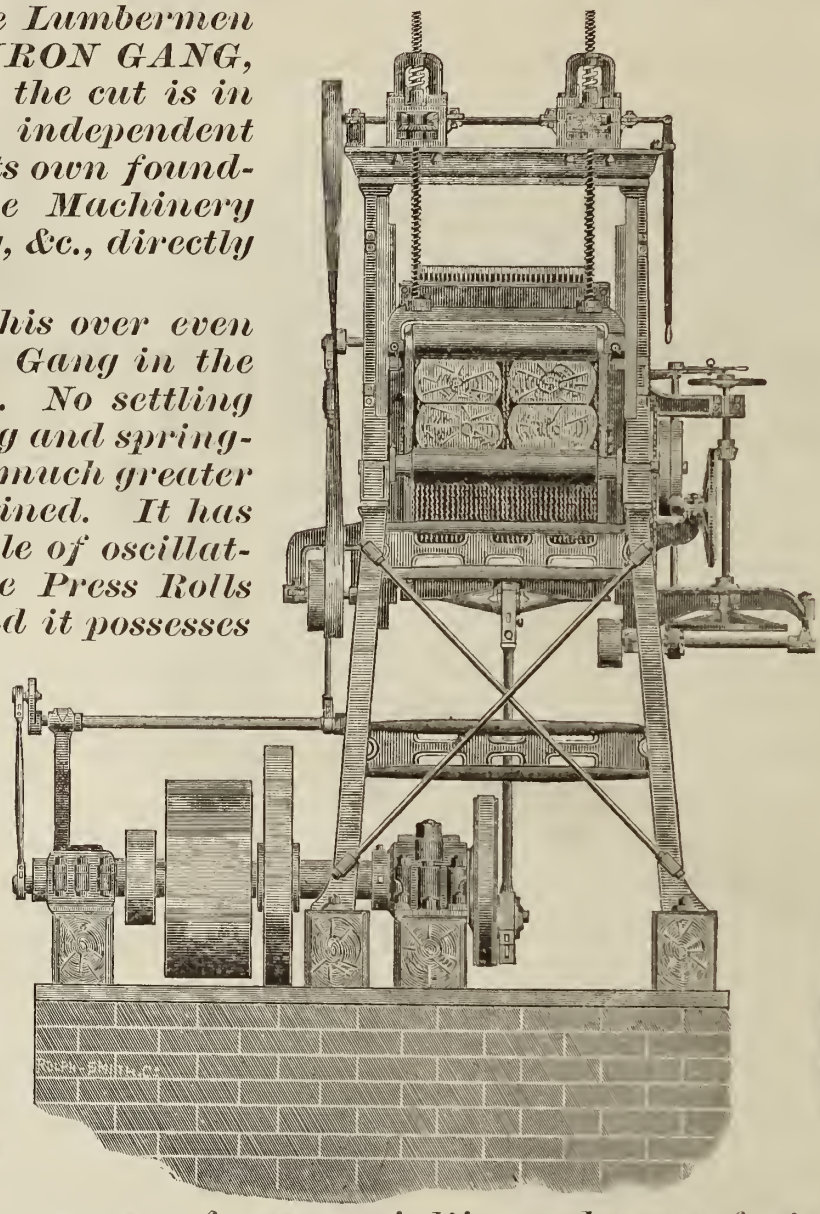
MANUFACTURERS OF

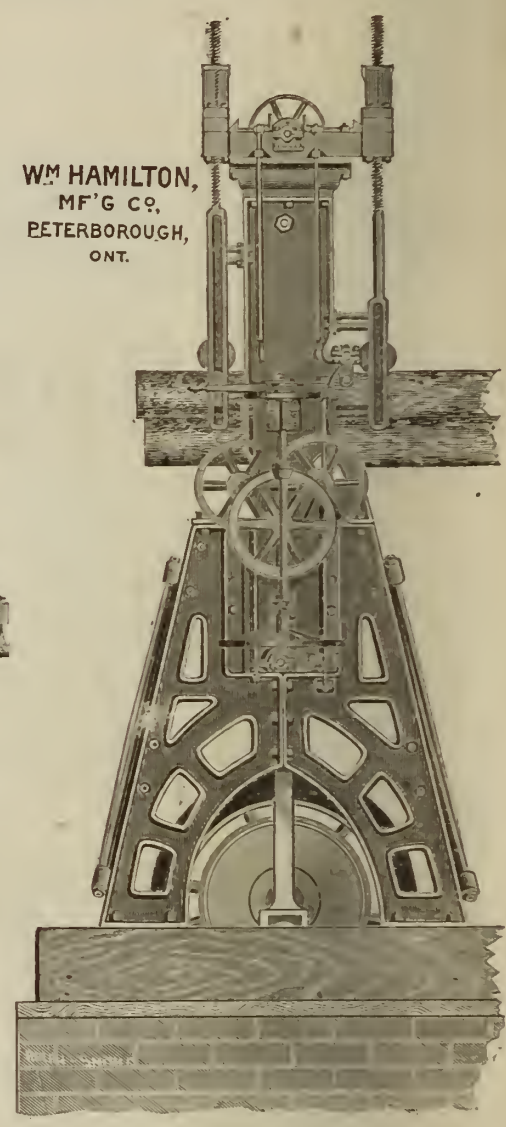
Saw Mills and General Machinery

PETERBOROUGH, - - - ONTARIO.

We introduce to the Lumbermen of Canada our New IRON GANG, which will be seen by the cut is in itself a complete and independent Machine, resting on its own foundations, having all the Machinery for operating, feeding, &c., directly attached.

The advantage of this over even a well built ordinary Gang in the mill frame is evident. No settling out of line, no yielding and springing of timber, while a much greater working speed is obtained. It has the most improved style of oscillating motion, it has the Press Rolls operated by power, and it possesses generally all the good features of best American Gangs, with heavier frame work and heavier shafting, all with a view to rapid, steady & correct working. A good look at one of these massive machines satisfies the sawmill man that they are in every way capable of continuously performing heavy duty throughout the season.

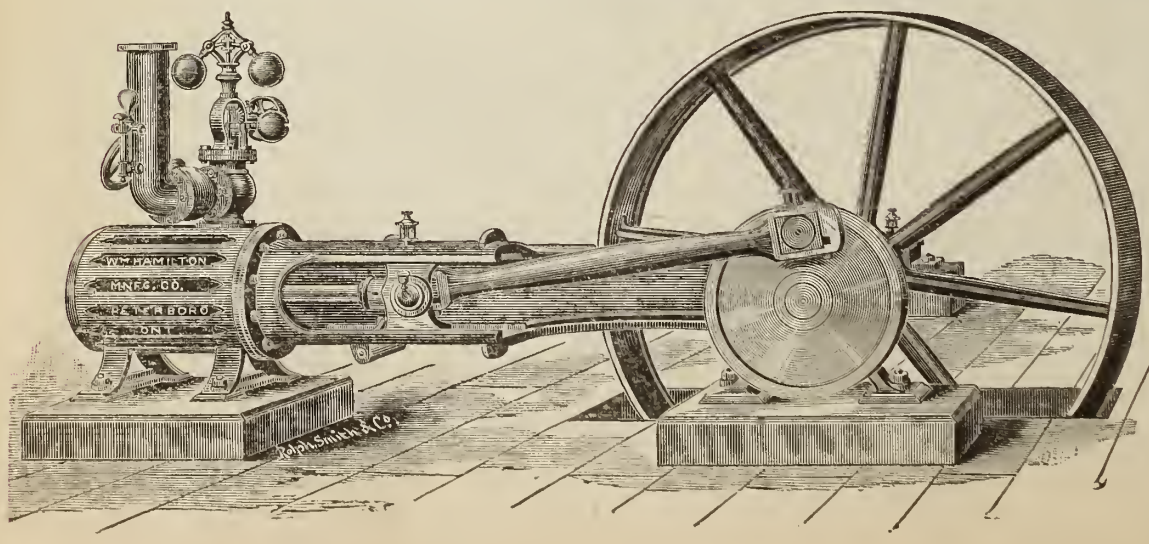




☞ *We make these Gangs one of our specialties and manufacture them of different sizes.*

—ALSO—

ENGINES AND BOILERS.



This cut represents our **SAW MILL ENGINE**, of which we make the following our Standard sizes, 12x16, 16x20, 18x24, and 24x30, built Strong and Substantial for Heavy Work. The Piston Rod, Cross-head Pin, and Wrist Pin, are made heavy and of the best steel; the Connecting Rod has solid ends and is tightened up by screw and wedge, avoiding all danger of keys getting out; the Slide Valve has a simple balance valve, requiring no attention from the Engineer, as it is self-adjusting. The Engine Shaft and Fly Wheel made very heavy. Belt Pulleys put on when required in place of Fly Wheel, and all regulated by the Judson Governor.

—IT WILL PAY YOU—

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TO ADVERTISERS.

It has a circulation among saw mill owners, manufacturers, lumber and timber dealers and all classes connected with the timber business.

Examine the field, count the cost, and you will at once decide that the CANADA LUMBERMAN is the

—CHEAPEST, BEST, MOST RELIABLE and ONLY TRUE MEDIUM—

for placing your goods or wares before the saw mill men and lumber and timber dealers of the Dominion

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SOLE CANADIAN REPRESENTATIVES OF

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Made in 4, 6, 8 and 10 Ply Thickness.
Any Length without joint.
Endless, if desired.
Any Width to 60 inches.

Four Ply is as cheap as good leather belting, stronger, runs truer, does not stretch, is not effected by heat or moisture.

Patent Cotton Belting!

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THE BEST MAIN DRIVING BELT IN EXISTENCE! Send for sample and quotations, stating work belt has to do. Replace all troublesome belts with the GANDY.

SOLID WOVEN COTTON BELTING, also kept in Stock.
EWART LINK BELTING, for Elevators, Conveyors, &c. Send for Catalogue.

AMERICAN SAWS!

☞ *SAVE YOUR TIMBER*
By using THIN SAWS!

16 Horse-Power Sawmill, driving a 48-in. 10-Gauge Trenton Saw.

GEORGE A. DOUGHERTY writes from Leamington, Ont., 12th May, 1883:

Gentlemen,—I would say that my 16 horse-power Champion Engine drives the thin saw, 48 inches in diameter, 8 and 10 gauge, with 40 teeth, (No. 2 Trenton short teeth), admirably. Our speed is 360 revolutions of the saw per minute. We have sawn over 50,000 feet of white ash in ten days; often having to stop on account of belt breaking; never hurrying at all, but taking great pains to saw the lumber to the best advantage; nor did we commence before seven a.m. or work after six p.m. During this time the saw has not made one bad run, or spoiled one foot of lumber, or once been hot. In maple, black ash or elm, I can, without pressing matters at all, cut 600 feet per hour into inch boards. One half day, running from eight a.m. till 12 noon, we sawed bill stuff, 1 in. x 12 in. and 2 in. x 4 in., 12 feet long; and joists 2 in. x 5 in. and 2 in. x 7 in., 22 feet long, making no effort to work fast, yet we cut 3,053. When cutting into inch lumber, we save at least 1,000 feet in every 16,000; besides, we cut more than when using the 6 and 7 gauge to amount to at least $5.00 per day for sawing. If our belt could stand it, we could run most of our time on 3½ inch feed. I think I would have no difficulty in running a 10x12 gauge.

9-Gauge Damascus Tempered Saw gives best of Satisfaction.

A. CALDWELL & SON write from Almonte, 12th June, 1883:

The saw we got from you recently (60-inch solid 8 and 9 gauge 60 teeth Emerson Damascus tempered saw) is giving the best of satisfaction, and is undoubtedly a great saving of lumber compared with the heavy gauge saws we used last summer, and runs with less strain on our engine, it being rather too small for the work it has to do. Send us by express a new Dominion Gummer and an Elliott 1880 Lacecutter.

Damascus Tempered 60-in. 10-Gauge Saw on 6-in. Feed.

RALPH MATHER writes from Ruscom, Ont., May 14th, 1883:

I have yours of the 10th inst., and in reply would say, that the 60-inch 10 gauge solid saw I bought from you gives every satisfaction. The inserted tooth saw I have is gauge 5. The new saw cuts nearly an ⅛ less kerf, and saves about 1,000 in 10,000; makes better lumber, and runs with one-third less power. Where a high and uniform speed can be obtained, a good sawyer will have no trouble with one of the same size as thin as gauge 12 at the edge. I feed this one as high as 6 inches to each revolution in sycamore.

50-in. Lumberman's Clipper 10-Gauge Saw.

SIMON PROCTOR, sawyer and manager for W. C. V. Hall & Co., Quebec, writes from Lyster Station, Quebec, November 19, 1883:

The Lumberman's Clipper, 50-inch Saw that I ordered from you is giving the best possible satisfaction. I have been running it six weeks in large **Rough Twisty Spruce Logs**, and must say it does better work than any other saw I have ever run, and it takes less power to drive it than any saw of same size with less teeth and thicker blade. I run it on one of your 30 horse-power Portable Mills—Locomotive Boiler—and have cut 50 logs with it without using a wrench on either arbour or guides, without filing, and never made a bad board, all inside of four and a half hours. You need not be afraid to recommend that kind of a saw to your customers.

Send for Sawyers' Hand Book; Illustrated Saw Circular; Large Lithograph to hang in your Mill.

Waterous Engine Works Company, Brantford, Canada